Brickcom

Network Camera

Brickcom Software User's Manual

For Firmware release V3.1.x.x

Brickcom Matrix

CB-Series

CB-100Ae,WCB-100Ae,CB-100Ae,WCB-100Ae,CB-101Ae,CB-102Ae,CB-100Ap,
WCB-100Ap,CB-102Ap,CB-102Ap

FB-Series

FB-100Ae,WFB-100Ae,FB-100Ap,WFB-100Ap,FB-130Ap,FB-130Np,WFB-130Np,
FB-300Ap,WFB-300Ap

MD-Series

MD-100Ae,MD-100Ap

FD-series

FD-100Ae,FD-100Ap,FD-130Ap,FD-130Np,FD-300Ap

VD-Series

VD-100Ae,VD-100Ap,VD-130Ap,VD-130Np,VD-300Ap

OB-Series

OB-100Ae,WOB-100Ae,OB-100Ap,WOB-100Ap,GOB-100Ap,WOB-130Np,OB-130Np,
GOB-130Np

OSD-Series

OSD-040D/E

PT-Series

PT-040D/E

Product name:	Network Camera v3.1.0.3
Release Date:	2011/7
Manual Revision:	V2.1
Web site:	www.brickcom.com
Email:	technical@brickcom.com
	info@brickcom.com
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Feature		Mode name
Live View		(*)
Camera/Video/Audio	Camera	(*)
	Video	(*)
	Audio	(*)
	Multicast	(*)
	Privacy Mask Control (*)	CB- Series Professional
Camera Control	Preset Point	OSD-040 PT-040
	Privacy Mask	
	Patrol Settings	
Network	IP Settings	(*)
	UPnP	(*)
	EasyLink	(*)
	Wireless	Wireless-Series
	HTTP/HTTPS	(*)
Event	Event Settings	(*)
	Motion Detection	(*)
	PIR(*)	CB- Series Professional
	Audio Detection	CB- Series Professional
Notifications	FTP Settings	(*)
	E-mail Settings	(*)
	Samba Settings	(*)
	HTTP Settings	(*)
	Digital Output (DO)	FB-Series OB-Series

		FD-Series VD-series VS series CB-101 series CB-102 series PT-040 OSD-040

	Video Clip	
	Audio Clip(*)	CB- Series Professional
	LED Light(*)	CB- Series Professional
System	System Log	(*)
	Date and Time	(*)
	Device Information	(*)
	Storage Management	FB-Series Professional OB-Series Professional FD-Series Professional VD-series Professional VS series Professional CB-101 series Professional CB-102 series Professional
	LED Indicators	(*)
Maintenance	User Management Language IP Filter Firmware Upgrade Configuration Reset to Default Reboot	(*)

(*)All Series on matrix

Brickcom

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Authentication

To access the camera's live view, open a web browser and enter the IP address of the camera. A dialog window will pop requesting a username and password. As stated on the previous page, for the default username and password for the Administrator are assigned as "**admin/admin**". For accounts other than the administrator's account, the user can choose to remember the password for future convenience. It is not recommended to check this box when viewing the camera feed from a public computer.



Installing the Plug-In

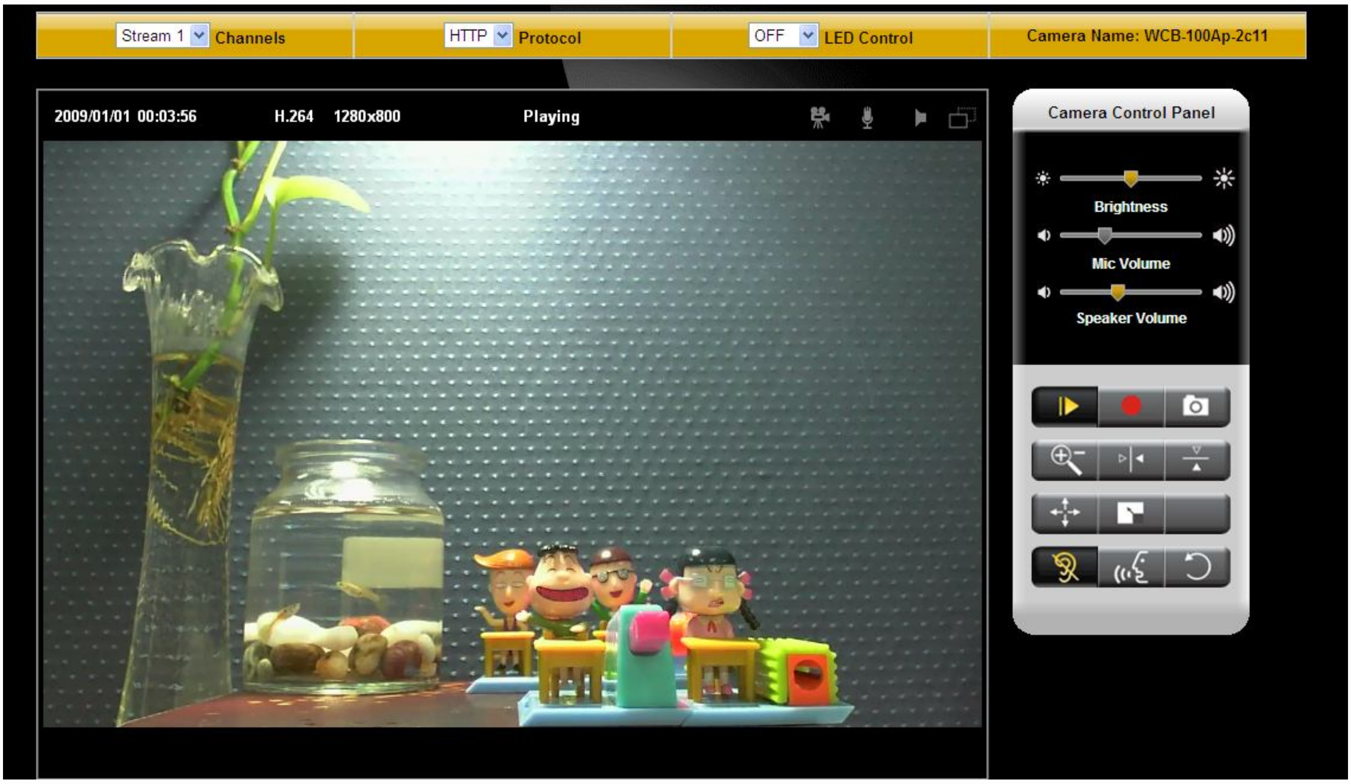
For the initial access to the camera in Windows, the web browser may prompt the administrator for permission to install a new plug-in for on Internet Explorer. Permission request depends on the Internet security settings of the user's PC or notebook. If the highest security level is set, the computer may prohibit any installation and execution attempt. This plug-in has been registered for certificate and is used to display the video in the browser. Click on 

to proceed. If the web browser does not allow the administrator to continue the installation, check the Internet security option and lower the security levels or contact the networking supervisor or IT for help.



NOTE – If an error occurred or the plug-in fails to install, it is because the version of the Electronic Signature is newly released and the VeriSign has not been submitted to Microsoft Windows update for validation. Therefore, plug-in will not have its root certificate. If IE discovers that there is no root certificate after the user's PC connects to the camera, it will automatically redirect to VeriSign Web site to download and install the latest root certificate to make the installation successfully. If the user's computer is able to connect to camera but unable to access the internet, then the installation will fail because the computer will not be able to download the latest root certificate. This problem can be resolved if computer can be connect to the internet and the camera at the same time and will not recur when Windows update patches become available.

Live View



NOTE - (*) These are optional features. Please refer to the Product List for the full list of optional features available for the product.

Live View is the default page that opens when accessing the camera. Live video is displayed directly in the browser window.

- ***Stream1/Stream2 Channels***

The network camera offers simultaneous dual stream for optimized quality and bandwidth. Go to Configuration → Camera/Video/Audio → Video to configure the codec compression and video resolution or refer to the Video configuration page.

- ***HTTP/TCP/UDP protocol***

HTTP – This unicast method can be used to traverse firewalls. Firewalls are commonly configured to allow the HTTP protocol, thus allowing RTP to be tunneled.

TCP - This protocol guarantees the complete delivery of streaming data and provides better video quality. The downside of using this protocol is that the quality of its real-time effect is less than that of the UDP protocol.

UDP - This protocol allows for more real-time audio and video streams. However, network packets may be lost due to network burst traffic and images may be broken. Activate UDP connection time-sensitive responses are more important than video quality.

LED Control(CB-series Professional only) – Use the drop-down menu to adjust the brightness of the camera's LED.

/ Recording on/off - Displays the status of recording video

/ MIC on /off - Displays the status of the MIC volume

/ Speaker on/off - Displays the status of the Speaker

/ MD on/off - Displays the status of Motion Detection

- **Brightness -** Drag the slider bar to adjust the image brightness level.
- **Mic volume** - Drag the slider bar to adjust the microphone volume.
- **Speaker volume -** The built-in speaker will play sound from an audio clip from the computer microphone when it is enabled.

For more Audio settings, please refer to the Audio configuration page.

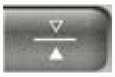
Playor Stop - Play or stop the video.

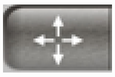
Recording - Record video to a computer.

Snapshot - Capture and save still images.

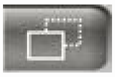
 Digital Zoom - Enable the digital zoom operation.

 Mirror - Horizontally reflect the display of the live video.

 Flip - Vertically reflect the display of the live video.

 Real Size - View the object in real size. Press it again to switch back to normal mode.

 Full Screen - Switch to full screen mode. Press the “Esc” key to return to normal mode.

 Motion Detection Alert - Enable the motion detection alert function.

 Mute – Turn off the sound.

 Talk(*) – To communicate through the camera using the computer MIC.

 Set Default – Reset to default settings.

PTZ Control(OSD-040,PT-040 only).

 Patrol - Enable the patrol function. If a designated patrol has not been set for that time period, the first patrol group on the patrol list will be enabled.

 Pan/Tilt Control - Click on the arrows to pan and tilt the camera. Click the center of icon to return to the home position.

 Joystick Mode – Scroll over the live view window to move the camera view in the direction of the mouse pointer.

 Center Mode - Click on a point in the live view window to center the camera view on that point.

NOTE

1. The <Camera Control Panel> functions have no effect on the recorded video. Whatever changes are made to the <Camera Control Panel> **will not** be applied to the recorded video.

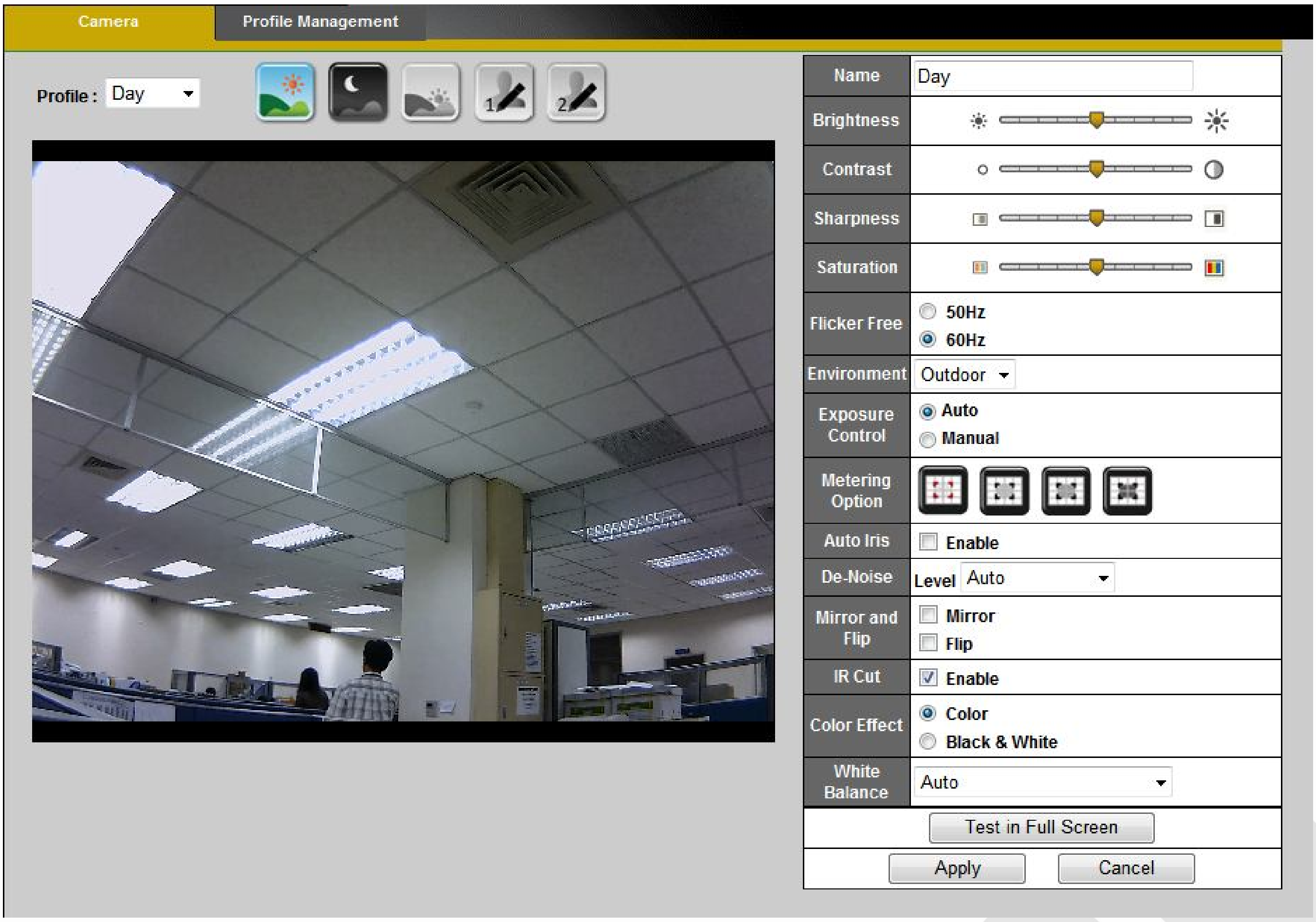
Configuration

Click <**Configuration**> on the main page to change the camera settings pages.

NOTE - Only Administrators can access the Configuration page.

Camera/Video/Audio

Camera



Profile – Up to five profiles can be created for different lighting environments. Day and night are default profiles and users can create up to three additional profiles. Select a profile from the drop-down menu or select different icons to change profile settings.

Name – Profile Name

Brightness - Drag the bar to adjust the image brightness level from -5 to +5.

Contrast - Drag the bar to adjust the image contrast level from -5 to +5.

Sharpness - Drag the bar to adjust the image sharpness level from -5 to +5.

Saturation - Drag the bar to adjust the image saturation level from -5 to +5.

***Flicker-Free* –** Eliminates the problem of flicker.

***Environment* –**Select outdoor or indoor mode based on the conditions.

Exposure Control

Auto: The camera will automatically control exposure.

Manual: Select this option to define the exposure manually

Metering Option–Center-weighted average metering.

Mirror and Flip

Mirror - Enable to horizontally reflect the display of the live video.

Flip - Enable to vertically reflect the display of the live video.

De-Noise

Auto - The camera will automatically filter the frame-to-frame defects to reduce the visual impact of blur.

The De-noise can be set between 1 to 3, with 3 giving the best video resolution.

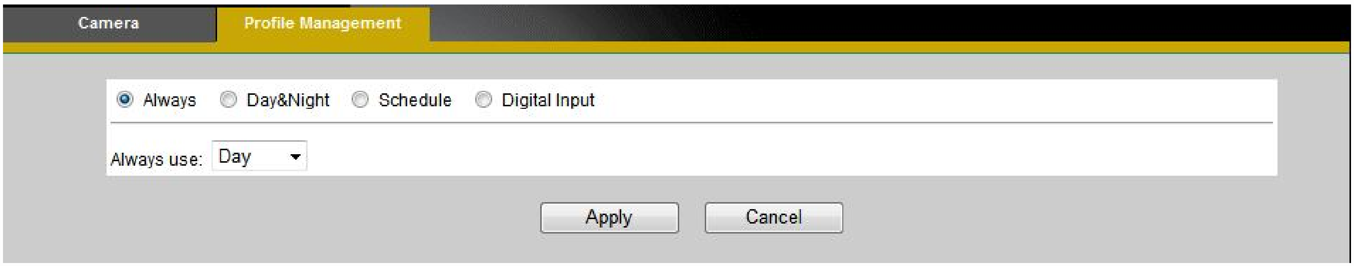
IR Cut (*)(Only available with models with a IR Cut) **–** Deactivate or activate the IR cut filter

***Color Effect* -** Select to display color or black and white video streams.

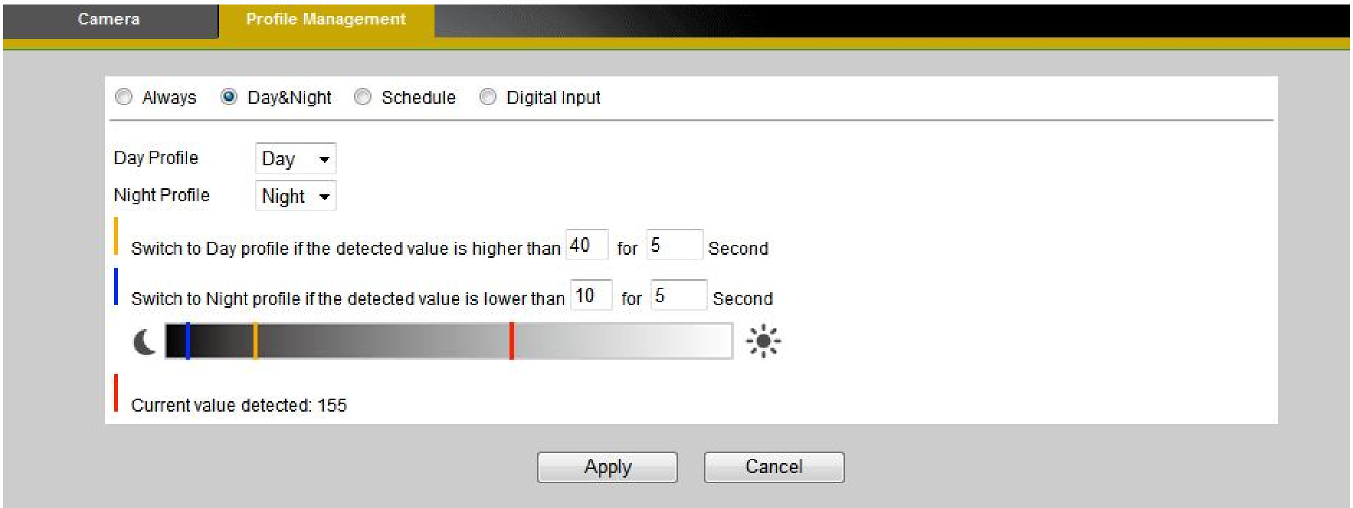
White Balance: White balance is a camera setting that adjusts for lighting in order to make Black & white.

.

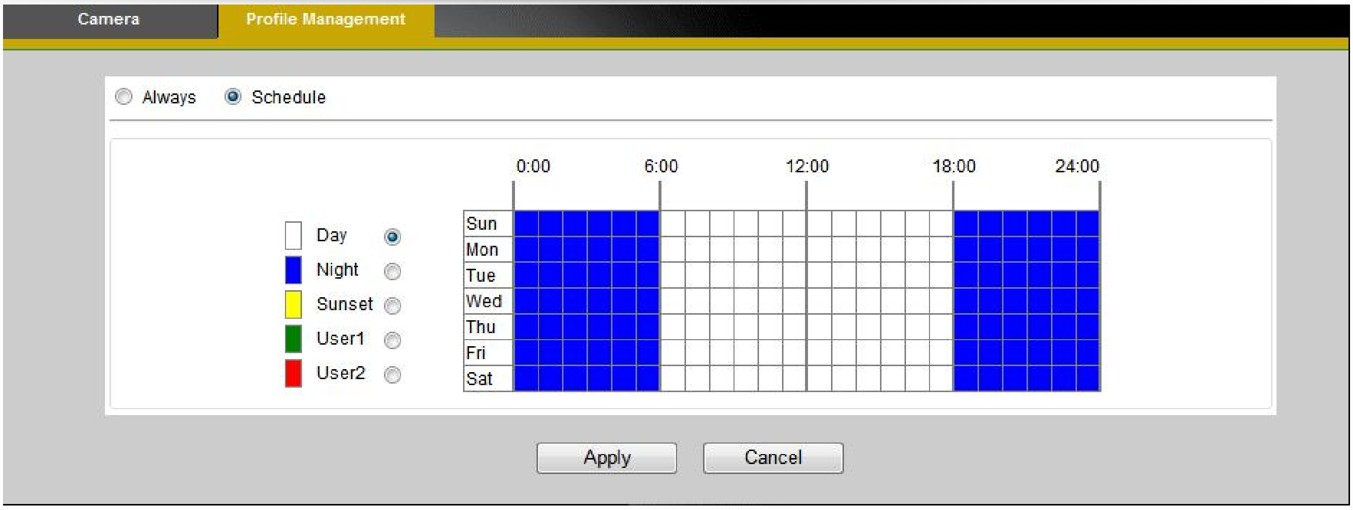
Profile Management : Profiles can be scheduled to change at scheduled times or under different lightening changes.



Always- Select Always to use a single profile. Select the profile from the drop down menu.



Day & Night (*) (Only available with models with a light sensor Mode)- Select Day & Night to schedule two profiles for day and night. Select profiles from the drop down menu for the Day and Night Profiles.



Schedule – Select Schedule to schedule specific time periods for different profiles.

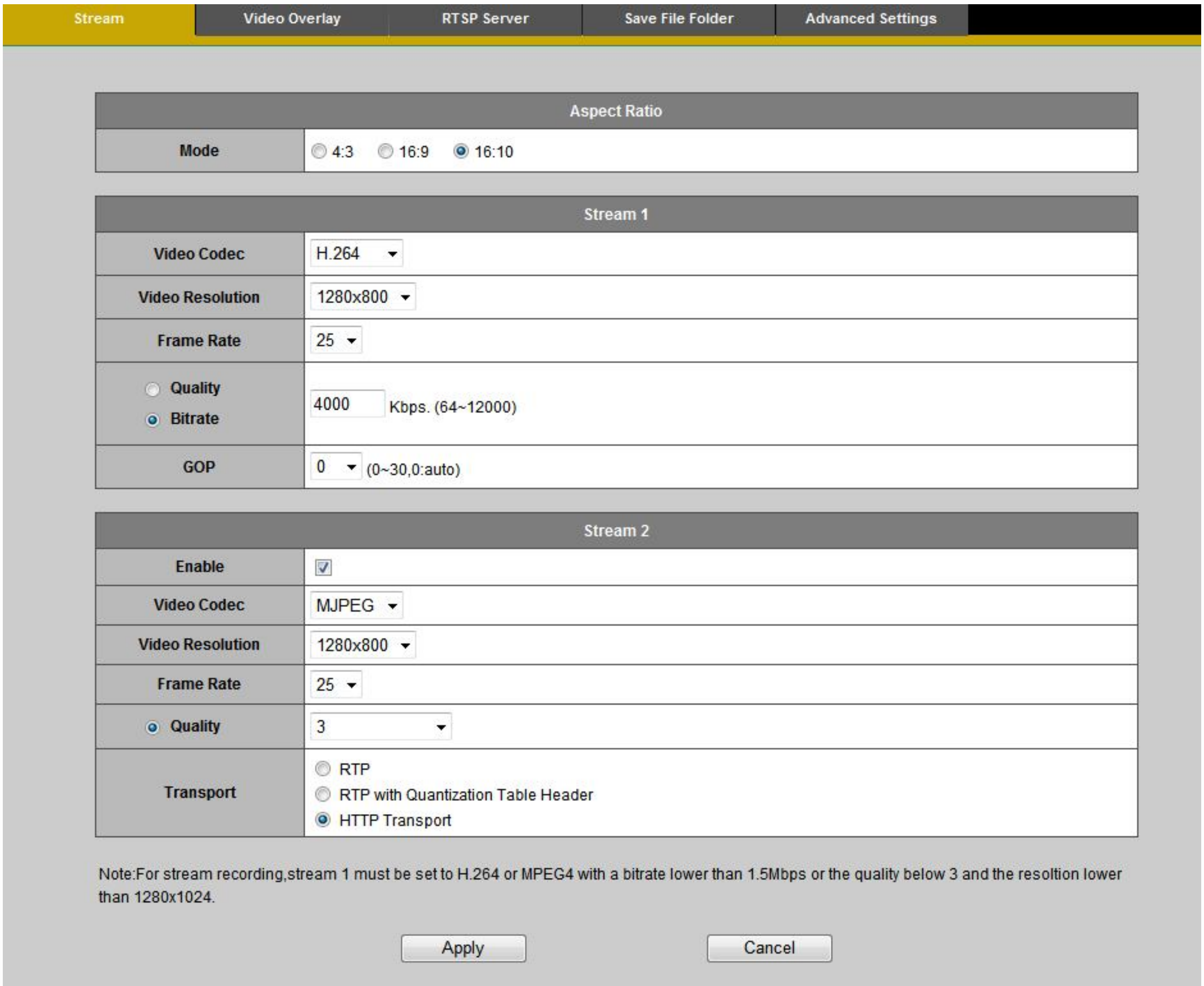


Digital Inputs (*) (Only available with models with a DI terminal)- Select Digital Input to have the profile management controlled by an external sensor. Select profiles from the drop down menu. Profiles will change according to different trigger voltage levels.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Video

The Network Camera offers two separate streams for different viewing options.



Stream 1 & Stream 2

Aspect Ratio – Select the width to height image aspect ratio.

Video Codec - The Network Camera offers three choices of video codec standards for real-time viewing: H.264, MPEG-4 and MJPEG.

Video Resolution - Select from the drop-down menu to choose the best resolution recording settings.

Frame Rate - Select the frame rate from drop-down menu. When H.264 or MJPEG is selected, the frame rate ranges from 1 to 30 fps. When MPEG-4 is selected, the frame rate ranges from 1 to 15 fps. Set a higher frame rate for

smoother video quality.

Video quality and bit rate - Choose either "quality" or "bitrate" to control the video quality with video codec at H.264 or MPEG4. Only "quality" can be chosen when video codec at MJPEG is selected.   Set the bitrate higher for a better video quality.

Transport-

RTP: The Real-time Transport Protocol (RTP) defines a standardized packet format for delivering audio and video over IP networks.

RTP with Quantization Table Header : Choose this option to explicitly include JPEG quantization table in the RTP stream [RFC 2435, section 3.1.8].

HTTP Transport : If MJPEG is used for Video Codec, HTTP Transport protocol must be enabled to remotely access the video stream.

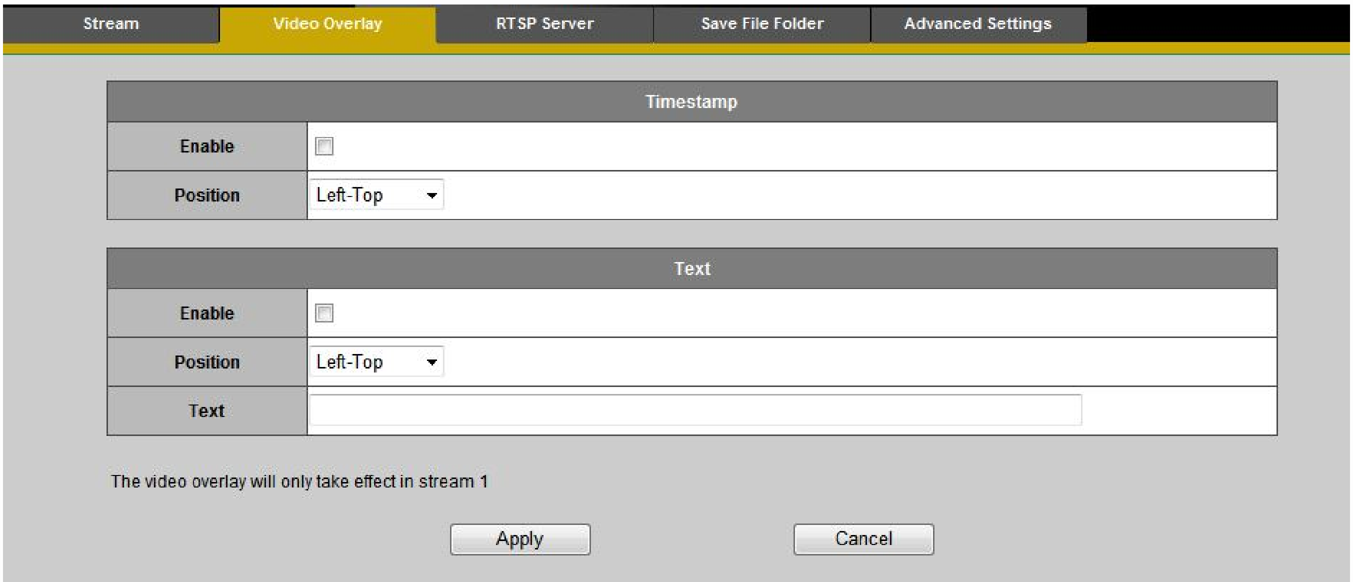
NOTE - a higher bitrate will use higher network bandwidth. The video quality can be set between Level 1 to Level 6, with Level 6 producing the best image quality.

HTTP Transport – If MJPEG is used for Video Codec, users can enable HTTP Transport protocol for video communication.

NOTE – HTTP Transport is for non-IE browser used only.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Video Overlay



Timestamp

To display the date and time on the screen during live view, check “Enable” to enable the timestamp function and select the display position from the drop-down menu.

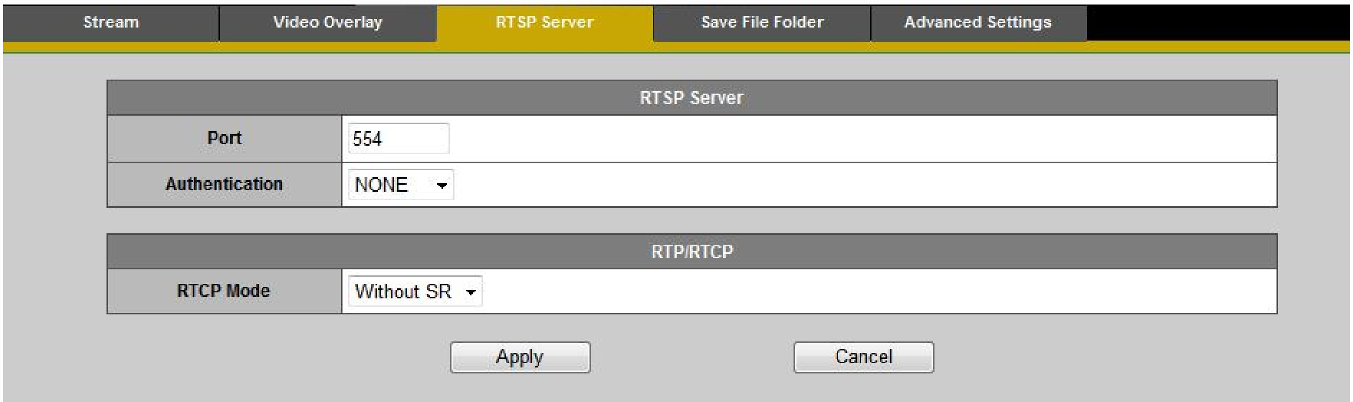
Text

To make a note about the camera, check “Enable” and select the display position from the drop-down menu. Enter a video description in the text box.

Click **Apply** to apply settings or **Cancel** to cancel changes.

NOTE - The video overlay will only takes effect in stream 1.

RTSP Server



To utilize RTSP authentication, the user must first set a password for the camera. RTSP (Real-Time Streaming Protocol) controls the delivery of streaming media. By default the port number is set to 554.

Authentication - Depending on the network security requirements, the camera provides two types of security settings for streaming via RTSP protocol: NONE and DIGEST.

If DIGEST authentication is selected, user credentials are encrypted using MD5 algorithm, thus providing better protection against unauthorized access.

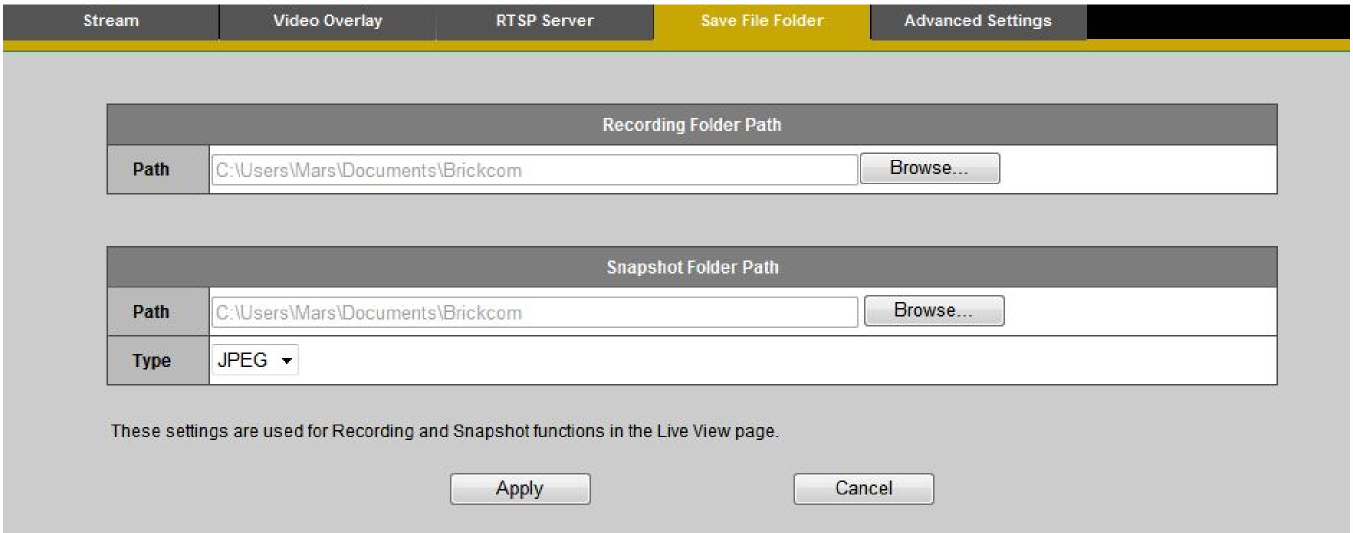
RTP/RTCP-

RTCP without SR - RTCP without SR (Sender Report) is the default option. Under this option, audio and video received from the IP camera are played immediately and independent of each other.

RTCP with SR - RTCP with SR option allows synchronization between video and audio on live viewing. Choose this option if audio and video become unsynchronized.

Click Apply to apply settings or Cancel to cancel changes.

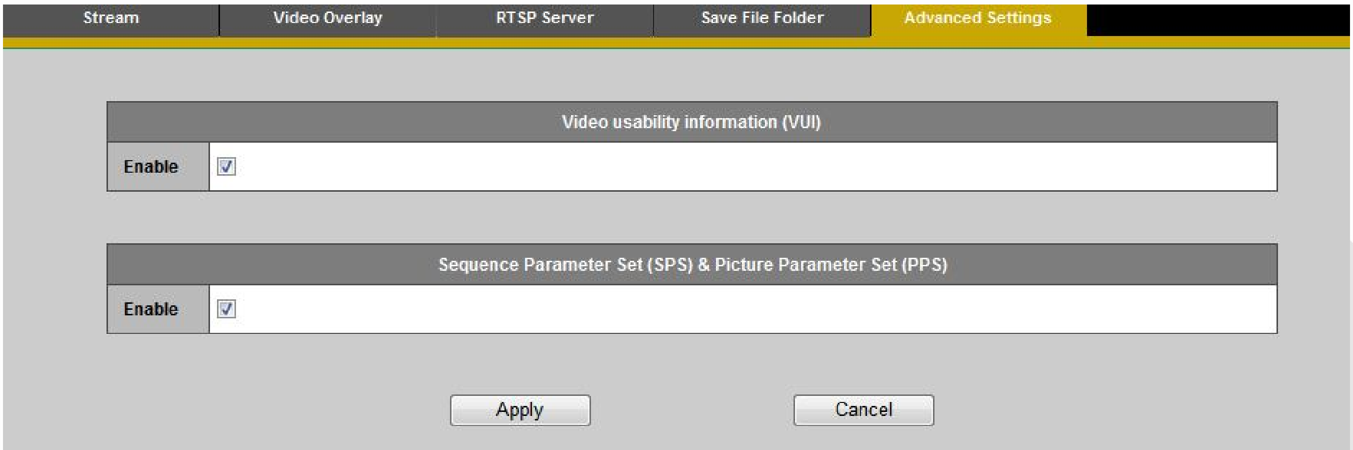
Save File Folder



Recording folder path - The destination for saving the recording video files. Click Browse to specify the saving path.

Snapshot folder path - The destination for saving the snapshot files. Click Browse to specify the saving path and select the format from the drop-down menu.

Advanced Settings



Video usability information (VUI)- Enable this feature to insert extra information into the bitstream to enhance the use of the video for a wide variety of purposes.

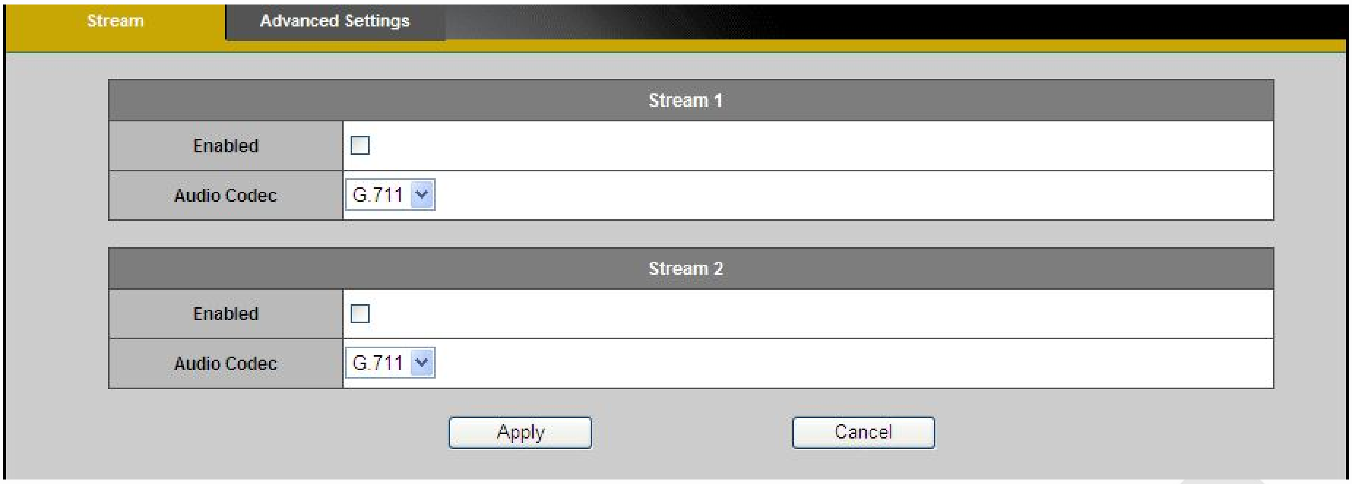
Sequence Parameter Set (SPS) & Picture Parameter Set (PPS)-

Enable or disable SPS and PPS in the H.264 packet， Sequence parameter sets (SPS), which apply to a series of consecutive coded video pictures called a coded video sequence, and Picture parameter sets (PPS), which apply to the decoding of one or more individual pictures within a coded video sequence.

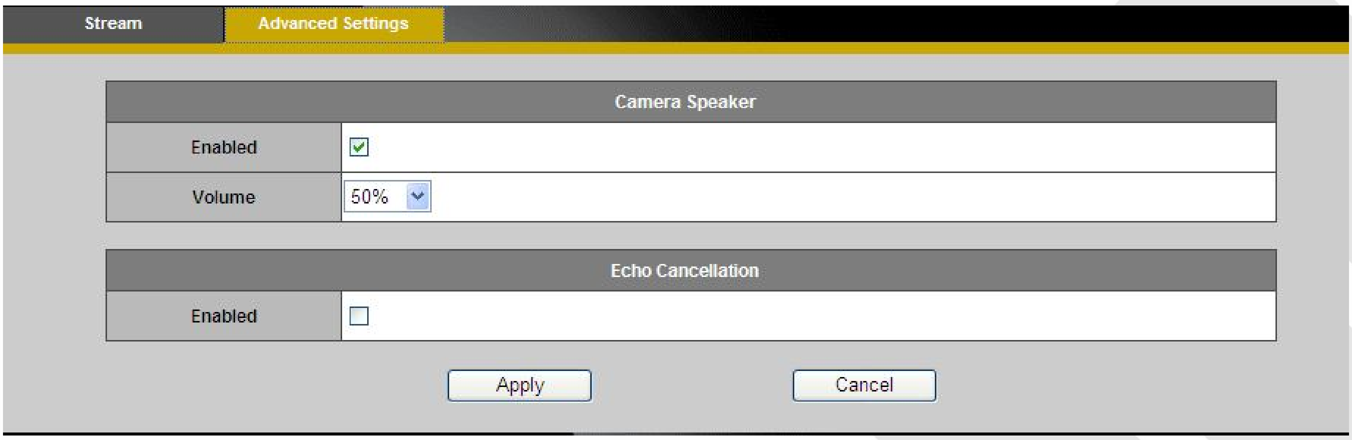
Click **Apply** to apply settings or **Cancel** to cancel changes.

Audio

The administrator can set up two separate streams for the camera for different viewing devices. The administrator can enable or disable the audio function on either stream. If audio enable is selected, select the Audio codec from the drop-down menu.



Advanced Settings



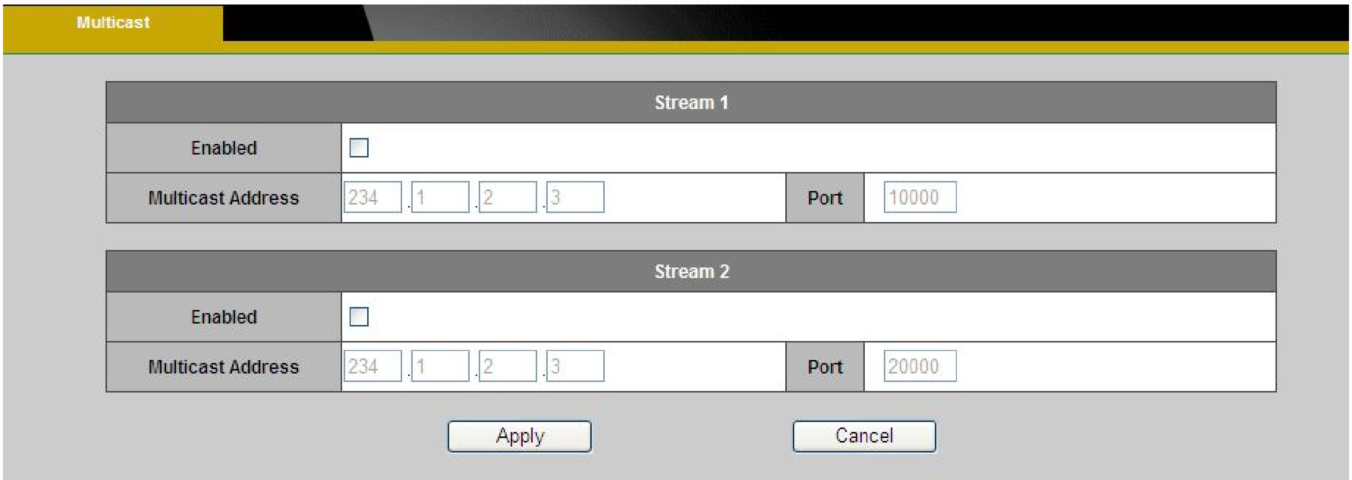
Camera Speaker – If the speaker is enabled, select the volume from the drop-down

menu.

Echo Cancellation Enabled - Enable to avoid an echo.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Multicast



Multicast sends a video stream to the multicast group address and allows multiple clients to acquire the stream at the same time by requesting a copy from the multicast group address. Therefore, multicast can effectively save Internet bandwidth. The RTSP (Real-Time Streaming Protocol) controls the delivery of streaming media.

Click “Enable” to enable Multicast stream 1 or Multicast stream 2. The default value for multicast address and port are 234.1.2.3 and 10000. Use different port number for different streams. It is recommended to use the default values.

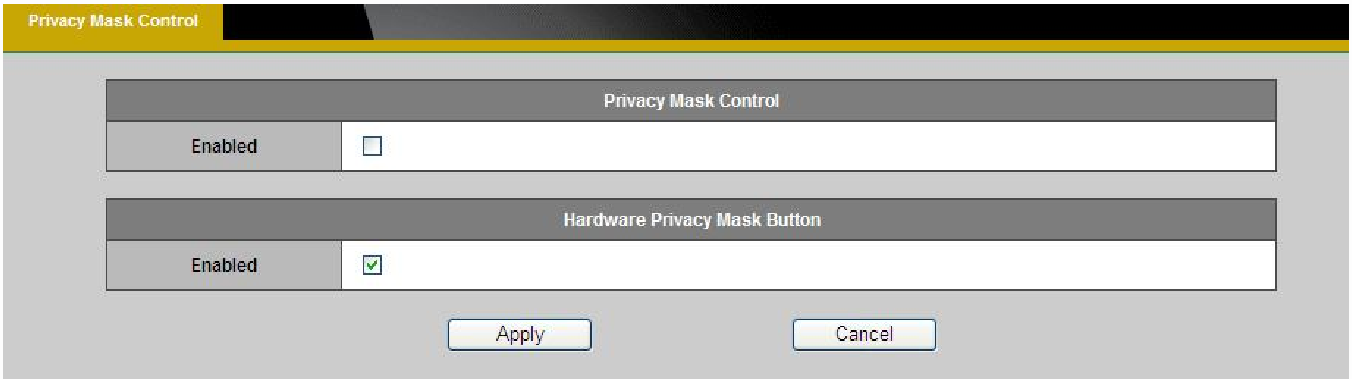
NOTE - Using the IP address of the Network Camera enables access to the video.

Example: rtsp://192.168.1.1/channel1

Click **Apply** to apply settings or **Cancel** to cancel changes.

Privacy Mask Control(*)

The Cube camera is equipped with a privacy feature which allows users to mask the camera's live view. A black screen will be displayed in place of the live view window. This application is particularly useful when the camera is being used for home surveillance. With the privacy button, the user can have privacy while they are going about their daily life.



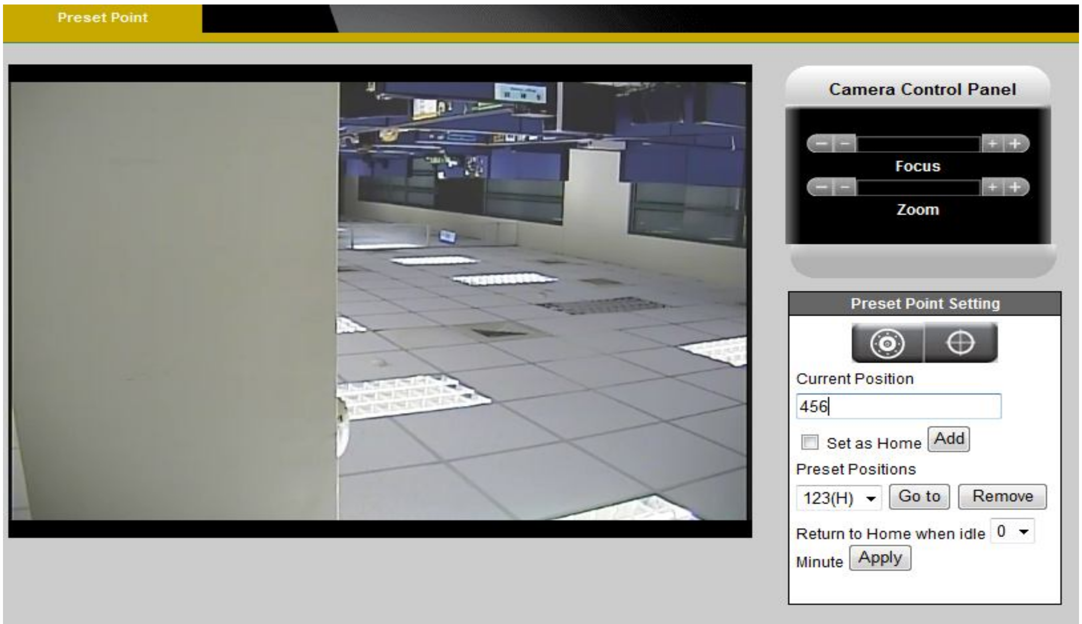
Privacy Mask Control – Enable the Privacy Mask control to remotely mask the camera's live view.

Hardware Privacy Mask Button(CB-Series Professional only) – Click to enable the privacy mask button on the camera. If this feature is not enabled, the user will not be able to use the privacy mask button.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Camera Control(*)

Preset Point



A preset position is a pre-defined camera view that can be used to quickly move the camera view to a specific location. To create a preset position:

a. Use the Pan, Tilt and Zoom (PTZ) controls to steer the camera view to the required position.

b. Enter a descriptive name under Current Position and click **Add**.

c. The camera position and focus settings will be saved as a preset position.

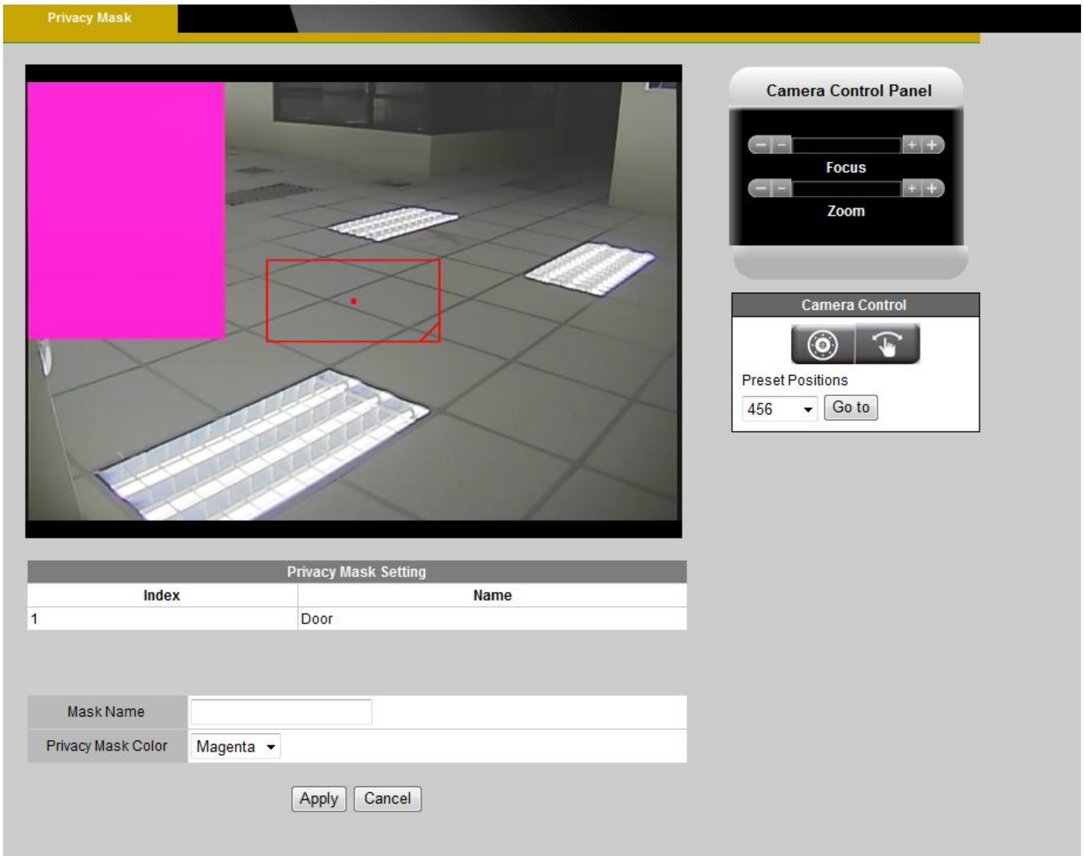
NOTE – A total of sixteen preset points can be set.

a. Preset Positions can be assumed at any time by selecting the preset position's name from the available positions drop-down list. One position can be set as the **Home** position, which is readily accessible by clicking the **Home** button in the PTZ panel.

NOTE - The name of the preset point set as **Home** will have (H) added; for example, Gate (H).

b. The camera can be configured to return to the **Home** position when the camera has been inactive for a specified length of time. Select the desired length of time from the drop-down menu and click **Apply**. Setting the time to zero prevents the camera from automatically returning to the Home position.

Privacy Mask



Add / Edit Privacy mask A privacy mask can be created to conceal areas within the camera's view. The Privacy Mask List displays all the masks that are currently configured for the network camera and if they are enabled.

NOTE – A total of sixteen privacy masks can be created.

To create a new privacy mask:

a. Use the Pan, Tilt and Zoom (PTZ) controls or select Preset Point from the drop-down menu to steer the camera view to the required position.

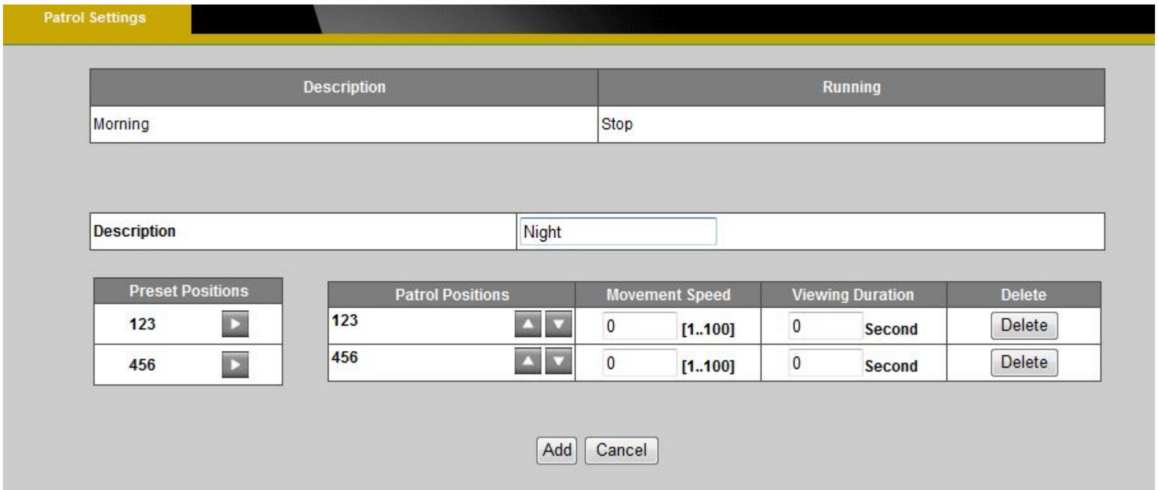
b. Click on **Add**. A rectangle will appear on the center of the viewing window.

c. Use the mouse to resize the privacy mask window.

d. Enter a descriptive name in **Mask name**, choose a color from the **Privacy mask color** drop-down menu and click **Apply**.

To edit a privacy mask, select the mask and reshape, move or change the color as needed.

Patrol Settings



The camera can be set to patrol a group of preset points. For each patrol group, the user can configure the preset point order, movement speed, and viewing duration.

To create a patrol group:

a. Click on **Add** and enter a descriptive name in **Description**.

b. Add preset points to the patrol group by clicking the  next to the desired preset point.

c. Use the arrow buttons to change the order of the preset positions by using the Adjust the sequence of positions, and enter **Movement Speed** and **Viewing Duration** for each preset point.

d. Click on **Apply** to save the patrol group.

e. Enable a patrol set by clicking on **Start/Stop**.

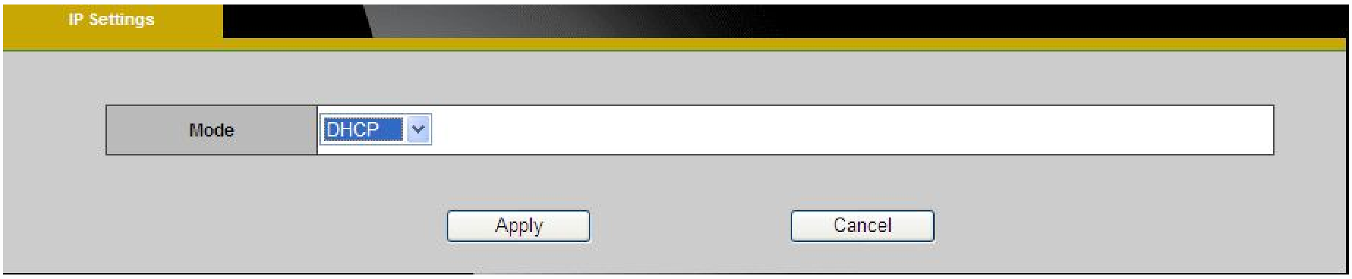
NOTE

1. A total of sixteen preset points can be assigned to a patrol group.
2. A total of four patrol groups can be assigned to a network camera.

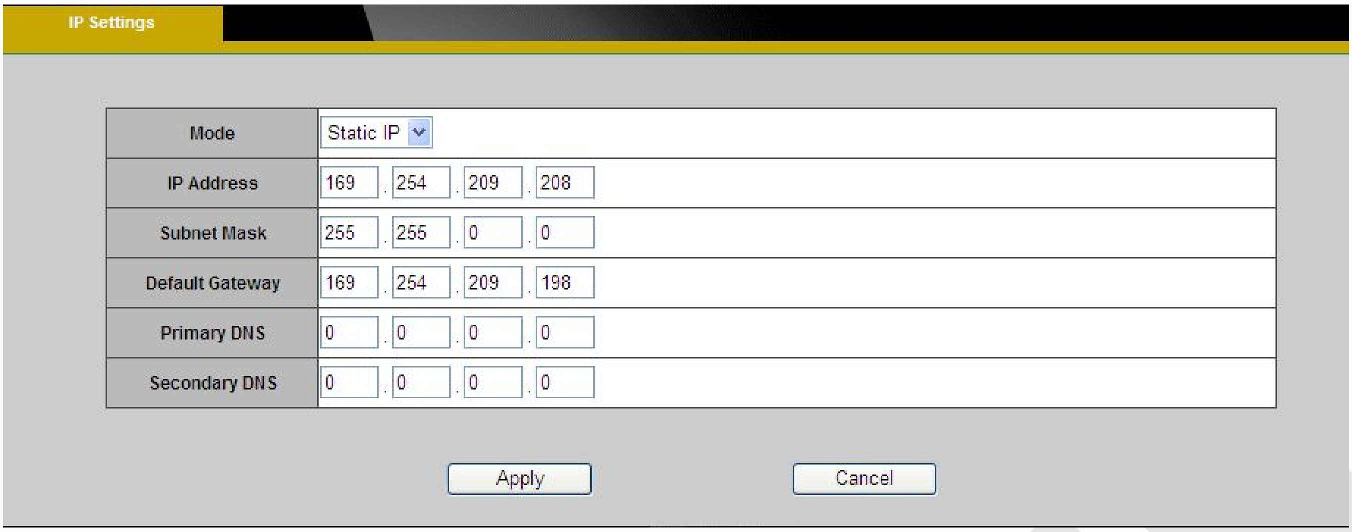
Network

IP Settings

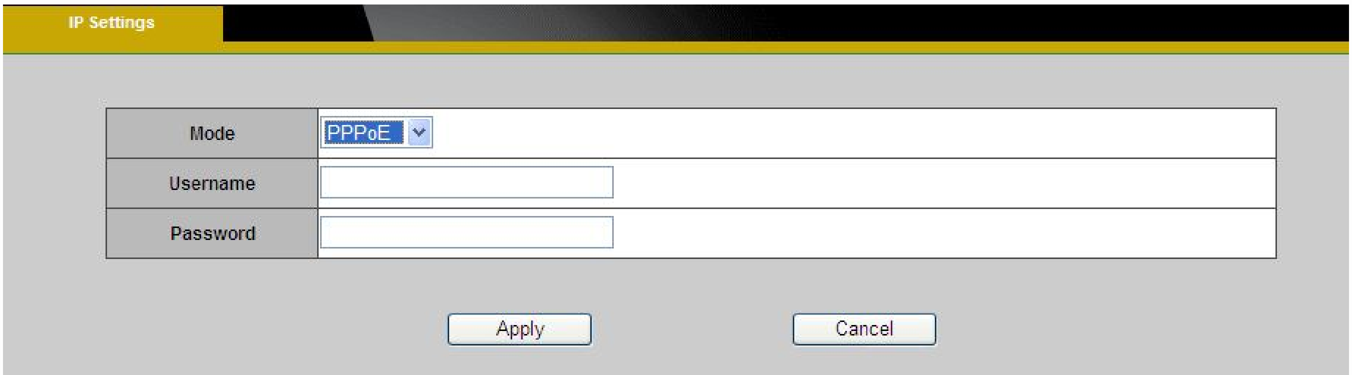
This section explains how to configure a wired network connection for the camera. There are several ways to setup the camera over the Internet: (1) obtain an available dynamic IP address assigned by a DHCP server, (2) use a static IP, or use PPPoE (Point-to-point over Ethernet). Select the desire setup mode from the IP settings drop-down menu.



1. **DHCP –**If this option is selected, the camera will automatically obtain an available dynamic IP address from the DHCP server each time it connects to the LAN.

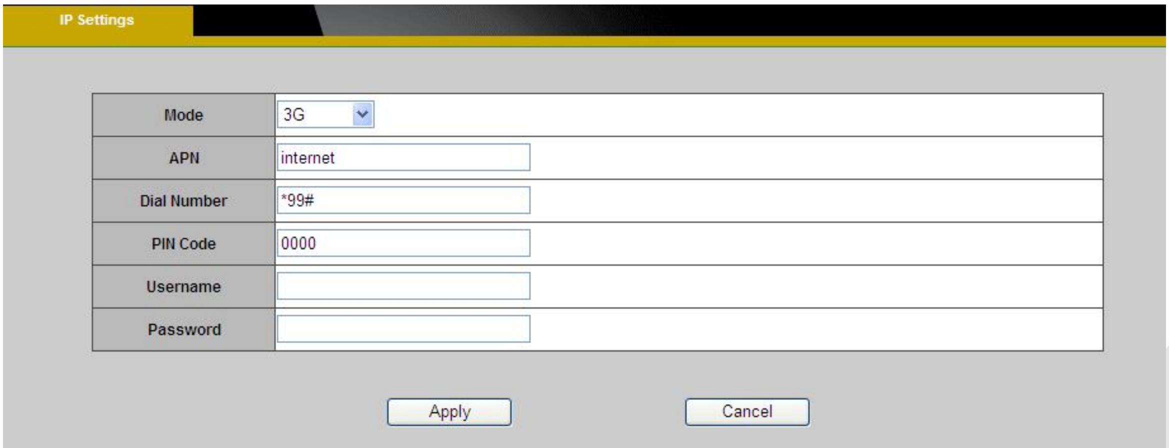


2. **Static IP -** Select this option to manually assign a static IP address to the camera. Enter the static IP address, Subnet mask, Default Gateway, Primary and Secondary DNS provided by the ISP.



3. **PPPoE** (Point-to-point over Ethernet)**:** Use this mode if connecting to the Internet through a DSL Line. **NOTE** - To utilize this feature, it requires an account provided by an Internet Service Provider. Enter the user name and password provided by the ISP. Click **Apply** to apply settings or **Cancel** to cancel changes.

4. **3G(*)**(3G Series Only) **–** Use this option if using a 3G SIM card to transmit video/audio surveillance over a 3G network



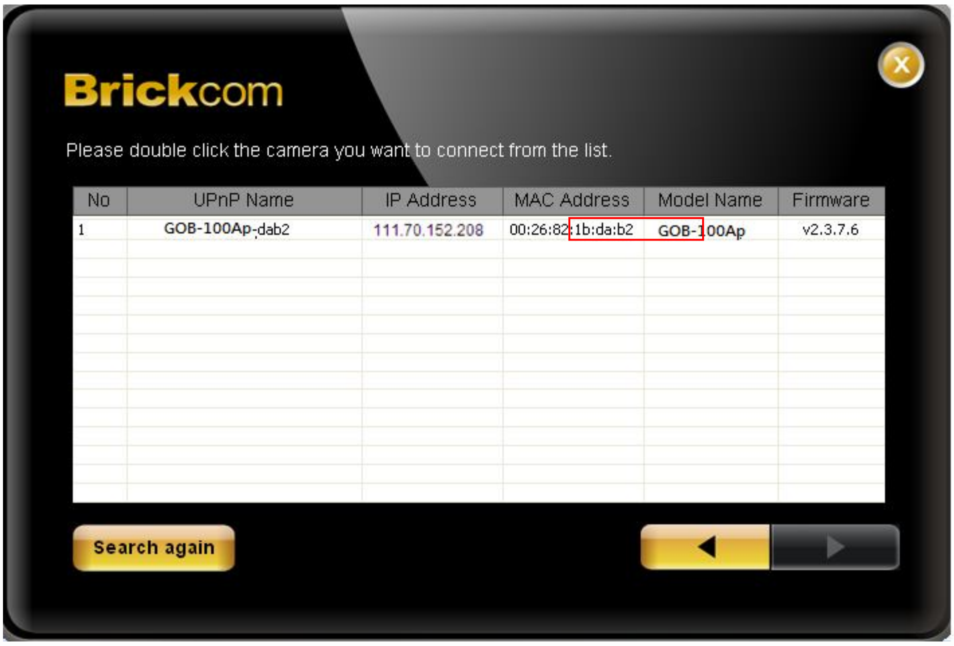
NOTE - This function is only available for GOB models.

a. Enter the APN (Access Point Number), Dial Number, PIN Code, User Name and Password provided by the ISP.

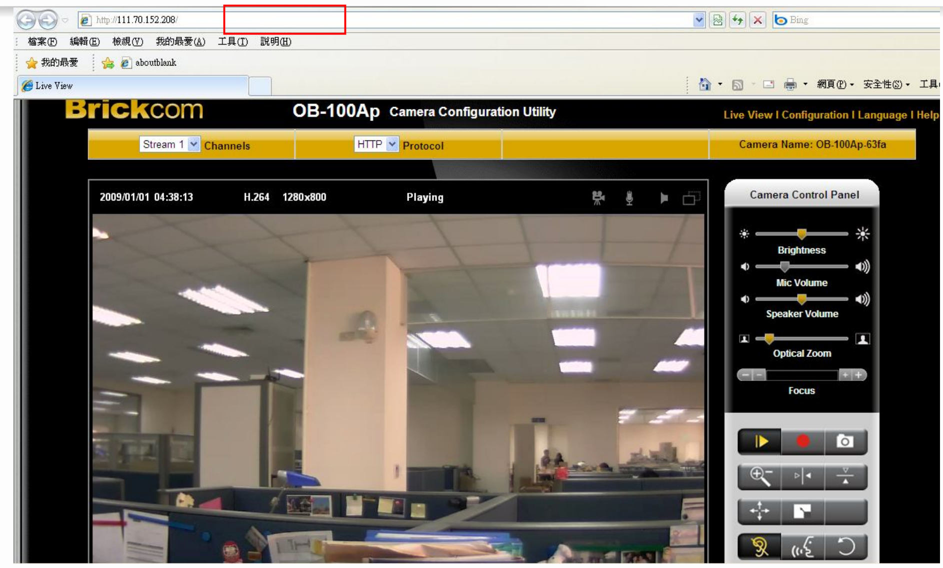
b. Click **Apply** to apply the settings. The message below will be displayed if the 3G settings were successfully applied.



c. Before disconnected the wired connection with the network camera, obtain the IP Address by opening EasyConfig. The 3G connection IP Address will be displayed in the IP Address column.

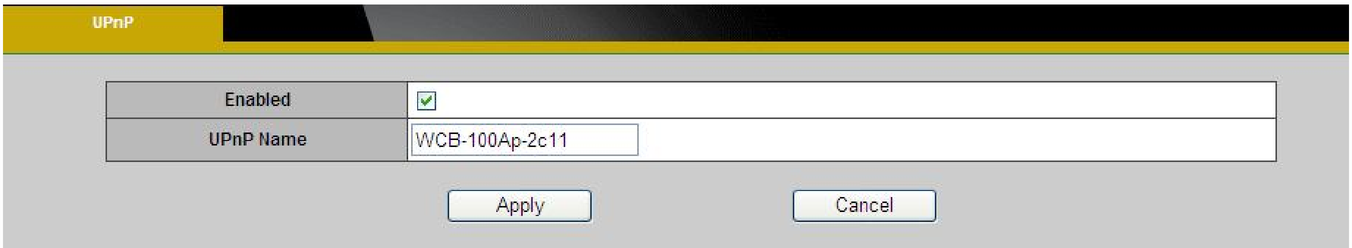


C. The network camera can now be accessed over a 3G network. To access the video feed through the internet, open a web browser and enter the network camera's IP address. A dialog window will pop up requesting a username and password. As stated on the previous page, the default username and password for the Administrator account are **"admin/admin".**

d. 

UPnP

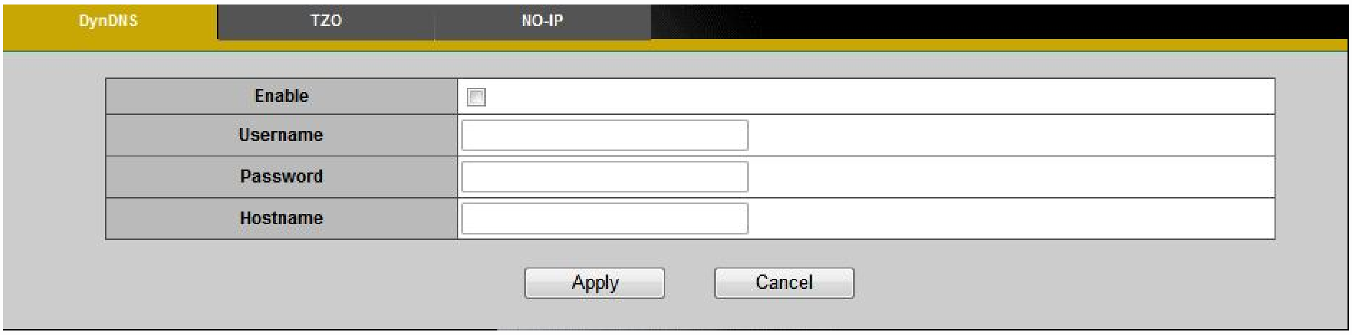
Universal Plug and Play (UPnP) simplifies the process of adding a camera to a local area network. Once connected to a LAN, the camera will automatically appear on the intranet. Click "Enable" to enable this function and enter an UPnP name which the camera will appear under on the intranet.



Click **Apply** to apply settings or **Cancel** to cancel changes.

DDNS (dynamic domain name service)

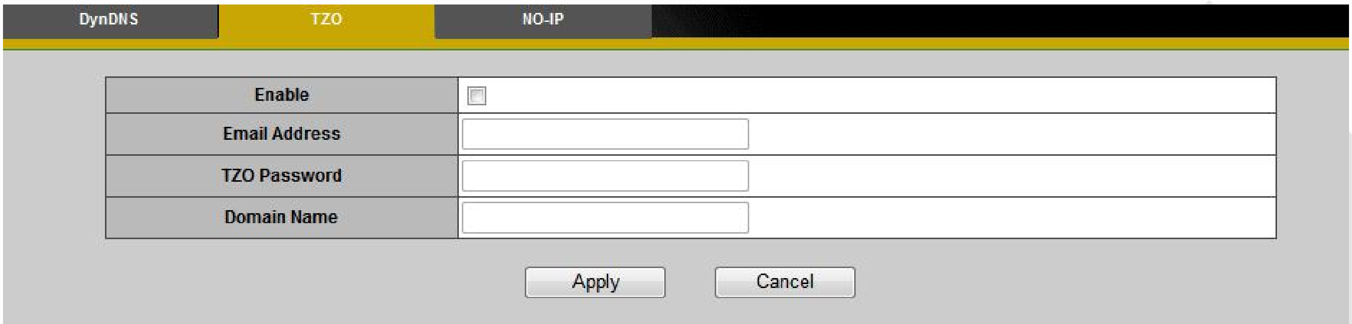
DDNS links a domain name to an IP address, allowing users to easily access their camera even with a changing IP address. Brickcom network cameras are compatible with three DDNS service providers (1) DynDNS, (2) TZO, and (3) No-IP. ⚠**NOTE** - Before utilizing this function; please apply for a dynamic domain account from a DDNS provider.



DynDNS – Enable the DynDNS to allow the camera to have a fixed host and domain name. Refer to the DynDNS website (www.dyndns.com) to apply for a dynamic domain account. When an account has been created, enter the username, password and hostname.

Click **Apply** to apply settings or **Cancel** to cancel changes.

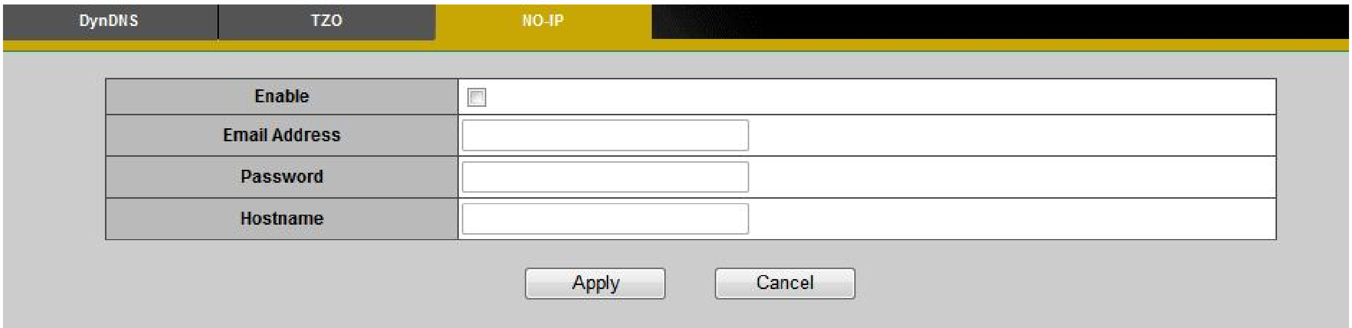
TZO



TZO is a DDNS provider which allows users to create a dynamic DNS. Refer to the TZO website (http://www.tzo.com/) to apply for a dynamic domain account. When an account has been created, enter the e-mail address, password and domain name.

Click **Apply** to apply settings or **Cancel** to cancel changes.

No-IP



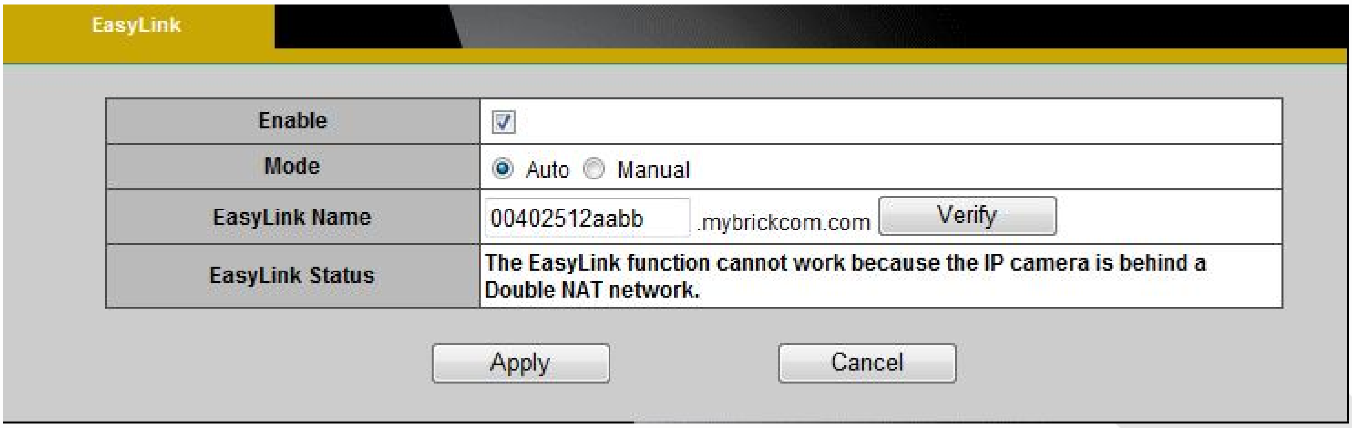
No-IP is a DDNS provider which offers DNS services, email, network monitoring and SSL certificates. Email services include POP3 email, outbound SMTP email, backup mail services and mail reflection and filtering. Refer to the No-IP website (www.no-ip.com) to apply for a dynamic domain account. When an account has been created, enter the e-mail address, password and domain name.

Click **Apply** to apply settings or **Cancel** to cancel changes.

EasyLink™

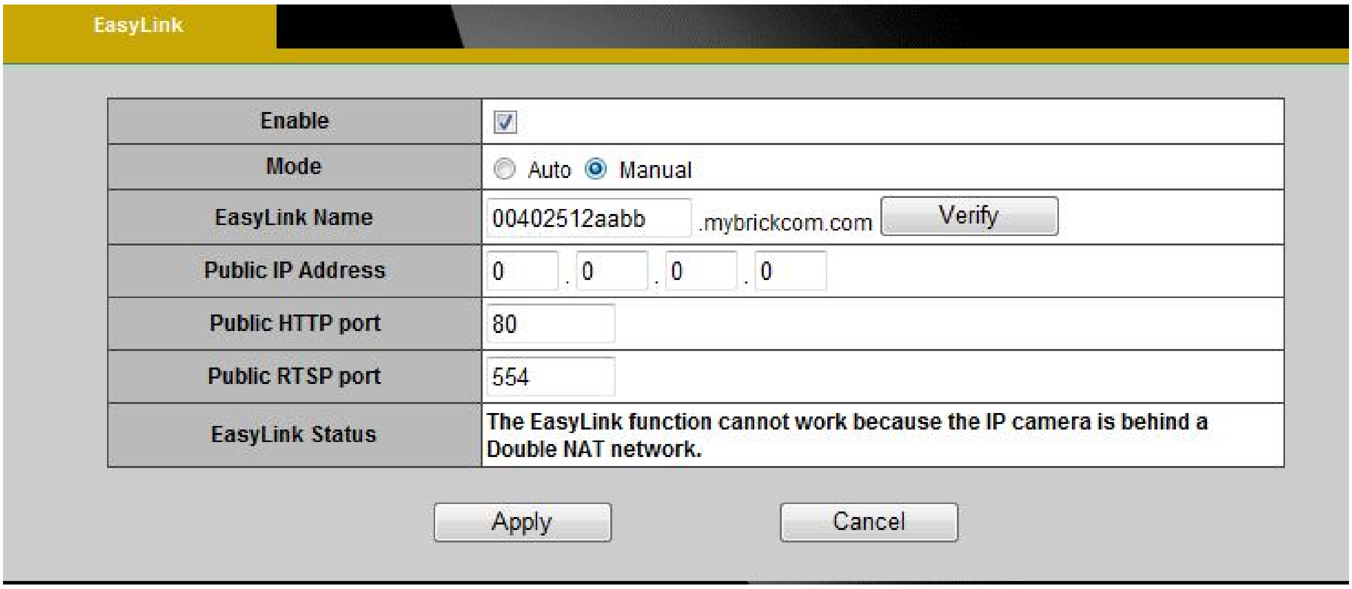
EasyLink™ is a unique Brickcom function which allows users to assign a unique EasyLink name to their network camera's IP address. There is no need to configure the router to open up ports or remember hard-to-memorize IP addresses. When this function is enabled, users can log onto [uniqueEasyLinkname].mybrickcom.com to view the camera's web GUI and live view.

1. Check the box to enable EasyLink™.
2. If Auto mode is selected, the following page will be displayed. **NOTE** - This mode is recommended.
3. Enter a unique EasyLink name whose length must be between 5-32 characters. Verify that the EasyLink name is available.



4. If Manual mode is selected, the following page will be displayed.

    a. Manually enter the Public IP Address, HTTP port and RTSP port or leave the default values.



Click **Apply** to apply settings or **Cancel** to cancel changes.

NOTE - The EasyLink function will not work if the following conditions occur:

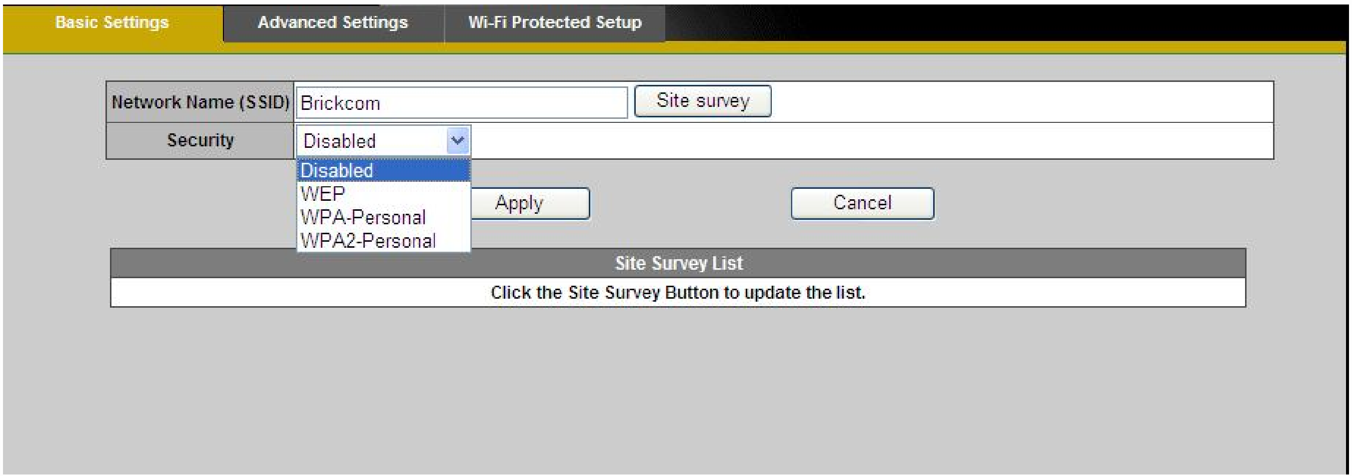
1. The camera cannot be located behind a double NAT network.
2. The camera's IP address cannot be assigned to specific port numbers using the router's port forwarding.
3. EasyLink uses UPnP to exchange port information with the router. The camera must connect to the internet through a router which supports UPnP.

Wireless(*)

These settings control how a Network Camera interacts with a wireless network. Users can identify the wireless network and enable wireless encryption.

NOTE – This function is only available for WCB models.

Basic Settings



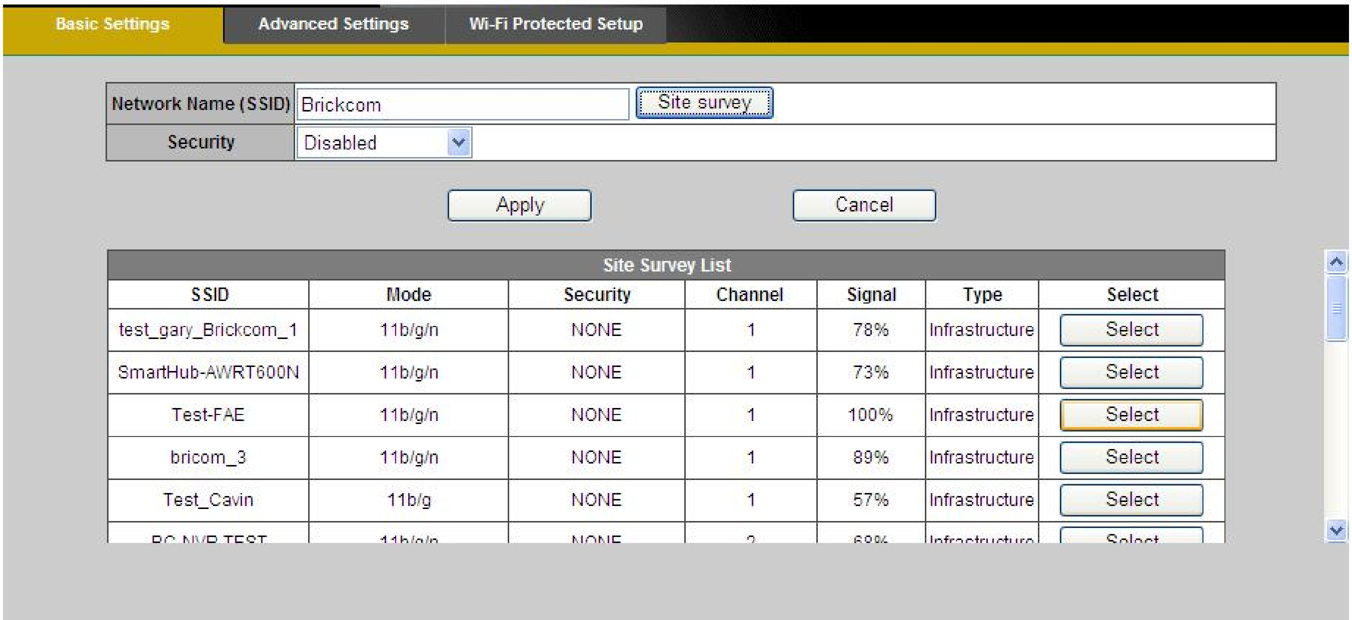
Network Name (SSID) - The Service Set Identifier (SSID) is the network name used to identify the wireless signal emitted from a wireless camera. It is case-sensitive and can be up to 32 characters long.

Wireless devices have a default SSID set by the factory. Brickcom wireless products use **Brickcom** as the default name. It is recommended for users to rename their SSID to something unique in order to distinguish their wireless device from surrounding wireless networks.

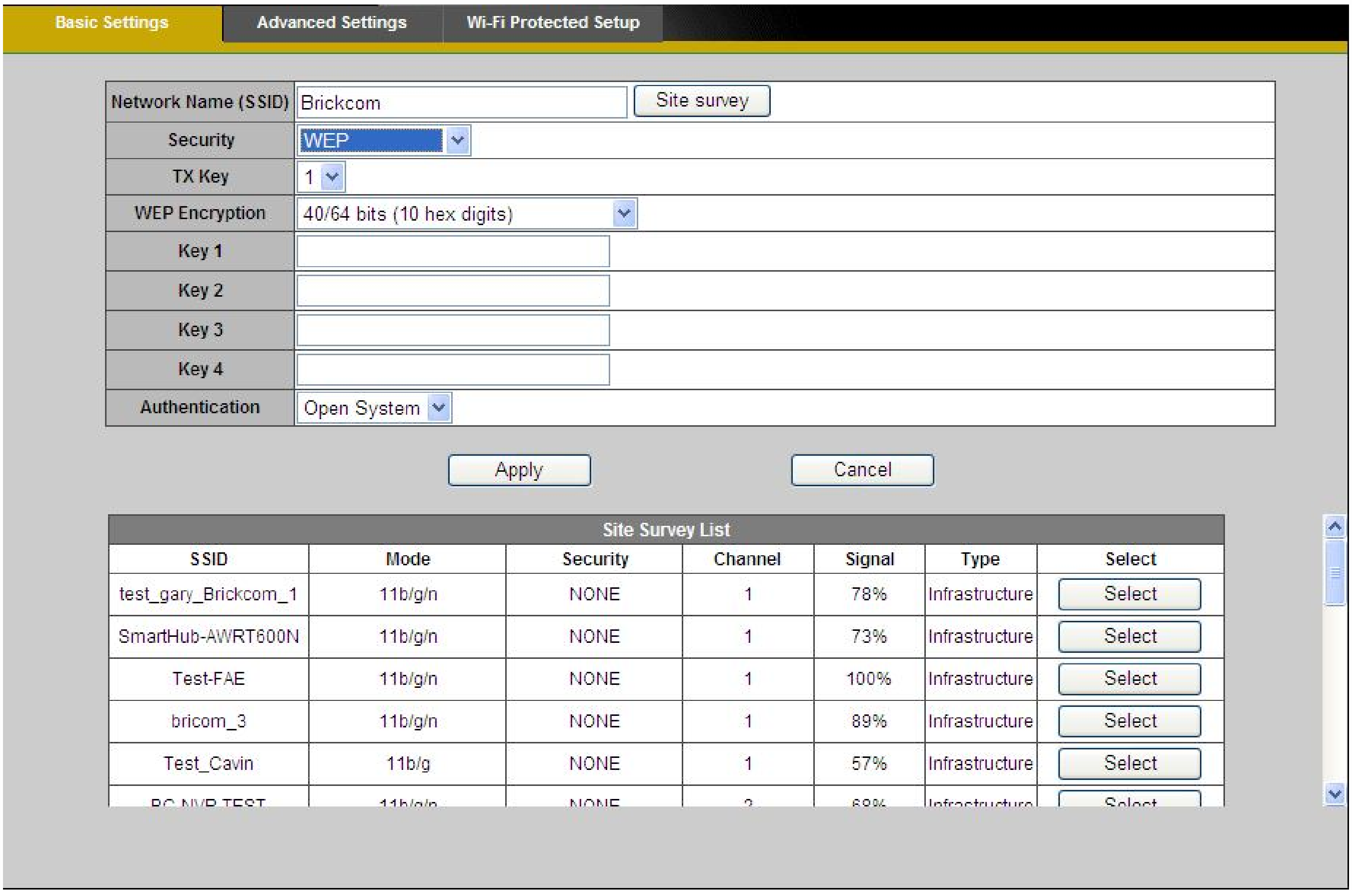
NOTE - Be careful when including personal information when naming the SSID as it is viewable by anyone browsing for wireless networks.

Security - Encryption protects data transmitted over a wireless network. Wi-Fi Protected Access (WPA-Personal/WPA2-personal) and Wired Equivalent Privacy (WEP) offer different levels of security for wireless communication. A network encrypted with WPA-Personal/WPA2-personal is more secure than a network encrypted with WEP because WPA-Personal/WPA2-personal uses dynamic key encryption. To protect the information as it passes through the airwaves, it is recommended to enable the highest level of encryption supported by the network equipment.

Site Survey – Survey the local area for available wireless networks. The user should select their Local Area Network (LAN) from the Site Survey List.



WEP- Wired Equivalent Privacy (WEP) is a basic encryption method which transmits network broadcast messages using radio signals. It is not as secure as WPA.



Tx Key - Select a key from the drop-down menu.

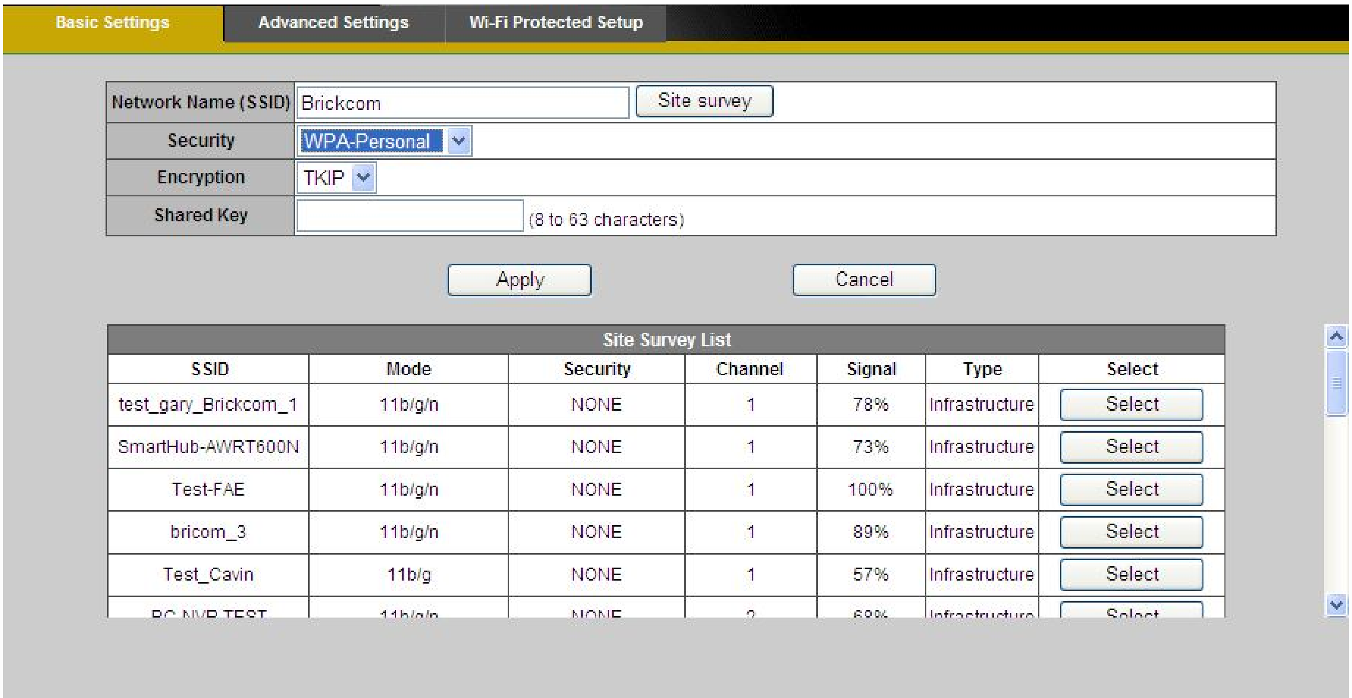
WEP Encryption - Select a level of WEP encryption: 64 bits 10 hex digits or 128 bits 26 hex digits. The default is 64 bits 10 hex digits.

Key 1-4 - Enter the WEP key(s) manually.

Authentication - The default is set to Open System, which allows either Shared Key or Auto authentication to be used. With Shared Key authentication, the sender and recipient use a WEP key for authentication. With Auto authentication, the sender and the recipient do not use a WEP key for authentication.

Click **Apply** to apply settings or **Cancel** to cancel changes.

WPA-Personal - WiFi Protected Access (WPA)-Personal

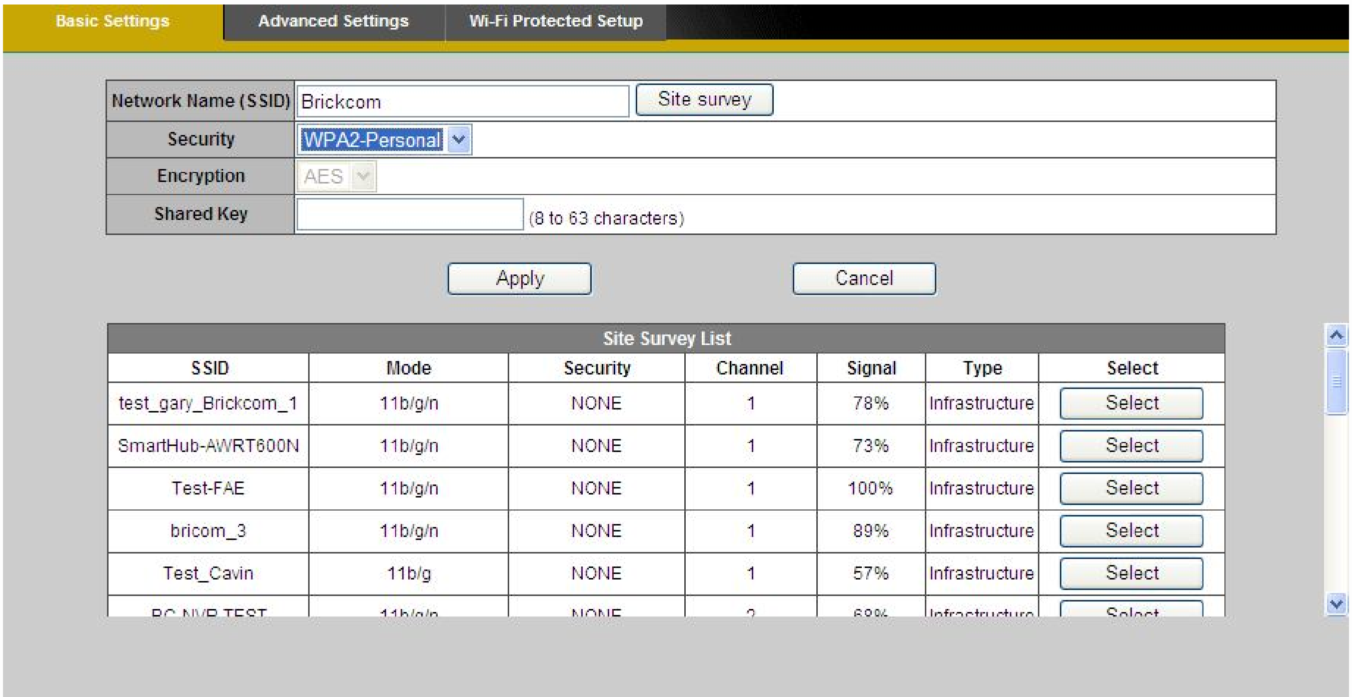


Encryption - Supports two encryption methods with dynamic encryption keys: Temporal Key Integrity Protocol (TKIP) and Advanced Encryption Standard (AES). Select the algorithm type from the drop down menu: TKIP or AES. The default is TKIP.

Shared Key - Enter the key shared between the Router and the server keys. Enter a password of 8-63 characters.

Click **Apply** to apply settings or **Cancel** to cancel changes.

WPA2-Persona l - WiFi Protected Access (WPA2-Personal)

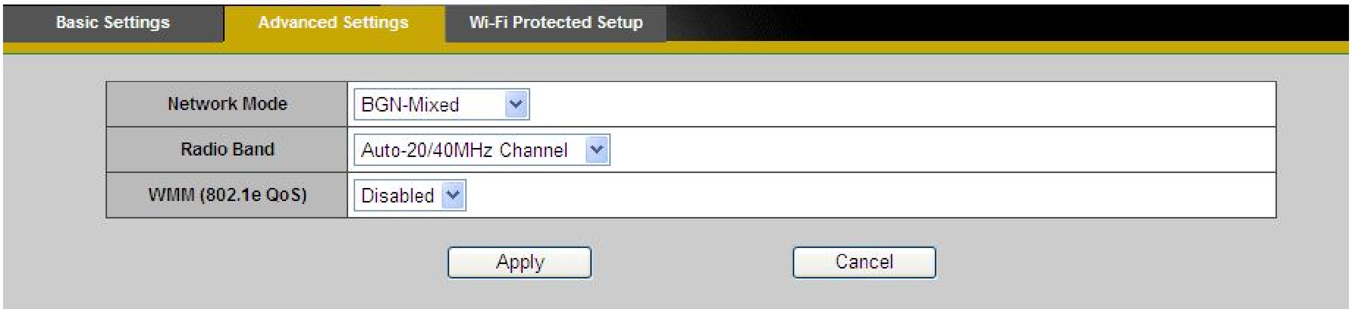


Encryption - WPA2 supports AES encryption method with dynamic encryption keys.

Shared Key - Enter the key shared between the Router and the server keys. Enter a password of 8-63 characters.

NOTE - If using WPA or WPA2, each device in the wireless network must use the same WPA or WPA2 method and shared key or else the network will not function properly.

Advanced Settings



Network Mode - From the drop-down menu, select the wireless standards running on the network.

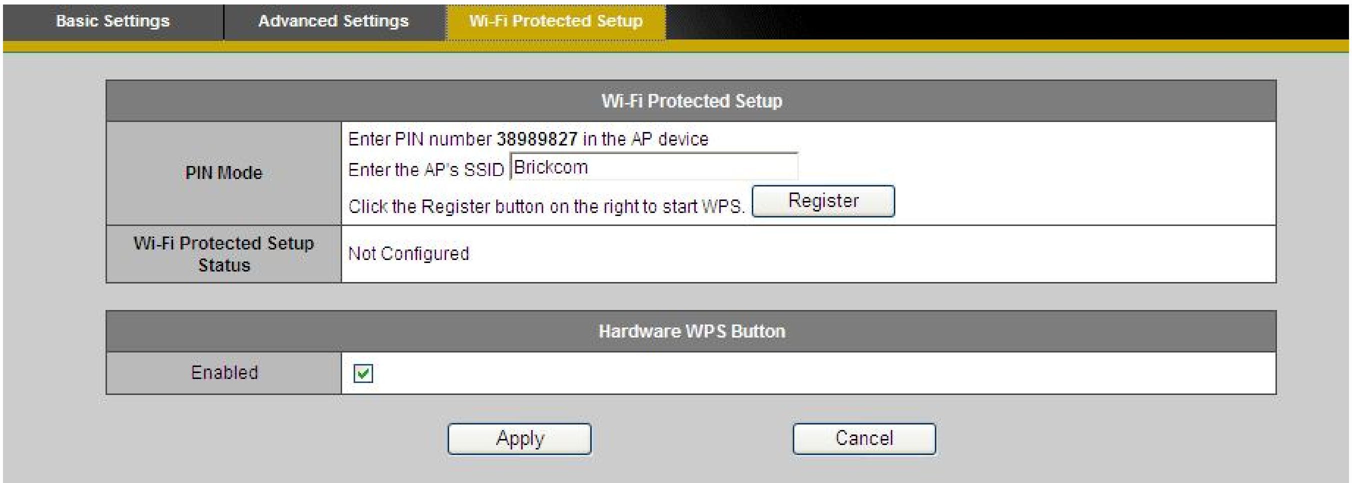
- If there are Wireless-B, Wireless-G and Wireless-N (2.4GHz) devices on the network, use the default setting, **BGN-Mixed**.
- If there are Wireless-B and Wireless-G devices on the network, select **BG-Mixed**.
- If there are only Wireless-B devices on the network, select **Wireless-B Only**.
- If there are only Wireless-G devices on the network, select **Wireless-G Only**.
- If there are only Wireless-N (2.4GHz) devices on the network, select **Wireless-N Only**.
- (*)If there are Wireless-A and Wireless-N devices on the network, select **AN-Mixed**.
- (*)If there are Wireless-A, Wireless-B, Wireless-G and Wireless-N (2.4GHz) devices on the network, use the default setting, **ABGN-Mixed**.
- (*)If there are only Wireless-A devices on the network, select **Wireless-A Only.**

Radio Band - The settings are available for the Auto-20/40MHz channel and Standard-20 MHz channel.

Enable WMM (802.1e QoS) - WMM is a wireless Quality of Service feature that improves quality for audio, video, and voice applications by prioritizing wireless traffic. To use this feature, the wireless client devices on the network must support Wireless WMM. The default setting is **Enabled.** To disable this feature, select **Disable**.

Click **Apply** to apply settings or **Cancel** to cancel changes

Wi-Fi Protected Setup

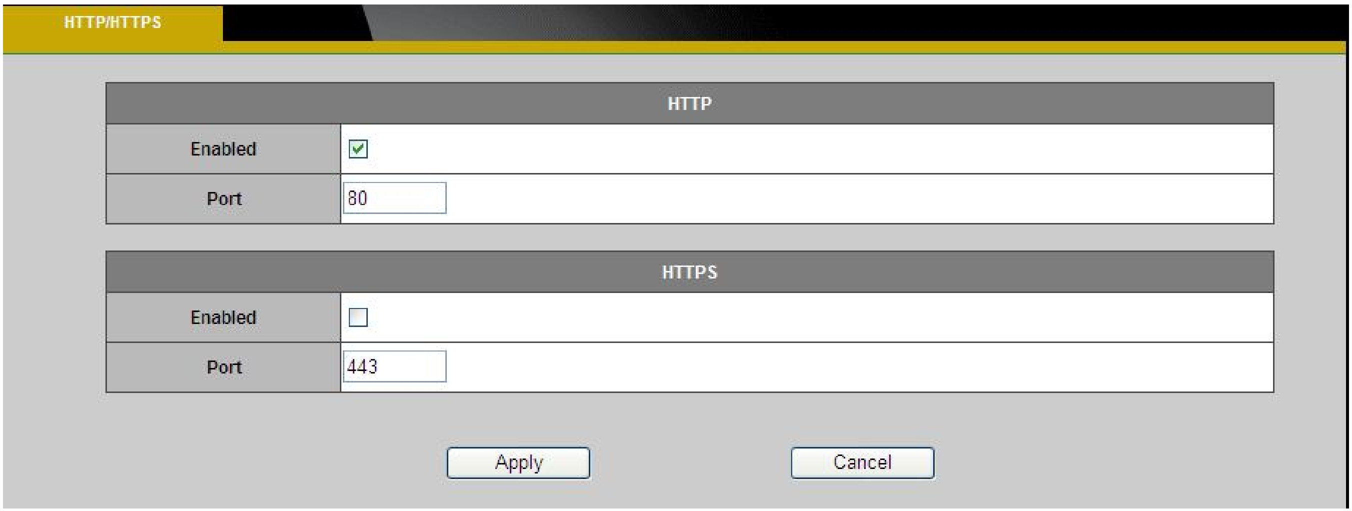


Use this method if the client device has a Wi-Fi Protected Setup PIN number.

1. Enter the network name from the device in the field.
2. Click <Register> to start WPS.
3. Click “Enable” to enable the WPS Button. If this feature is not enabled, the user will not be able to use the WPS button

Click **Apply** to apply settings or **Cancel** to cancel changes.

HTTP/HTTPS



HTTP – (HyperText Transfer Protocol) - This protocol allows for TCP protocol quality without having to open specific ports for streaming. Users inside a firewall can utilize this protocol to allow streaming data through.

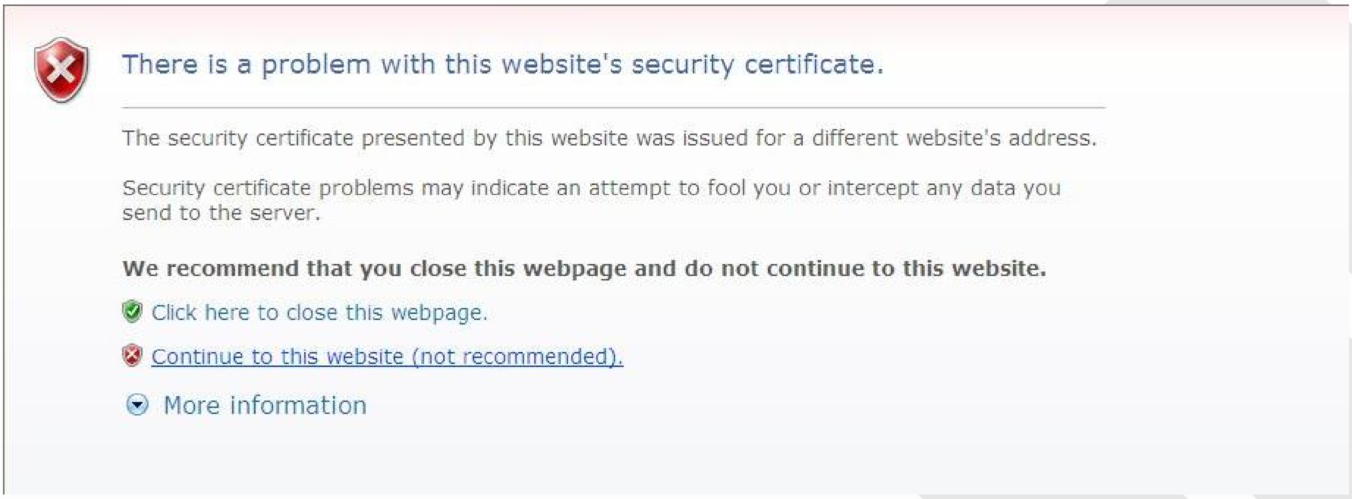
HTTPS - (Hypertext Transfer Protocol over SSL) - This protocol allows authentication and encrypted communication over SSL (Secure Socket Layer). It helps protect streaming data transmission over the Internet on a higher security level than HTTP.

Click "Enable" to enable and **Apply** to apply settings or **Cancel** to cancel changes.

.

To enable HTTPS, users have to create and install a certificate.

1. Click "Continue to this website" to install.



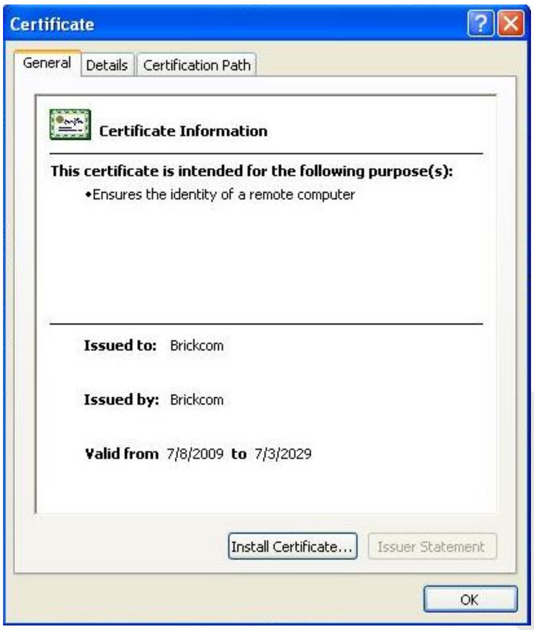
2. Enter the User name and Password of the camera.



3. Click "Certificate Error" on the top right corner of the window to view the certificate.



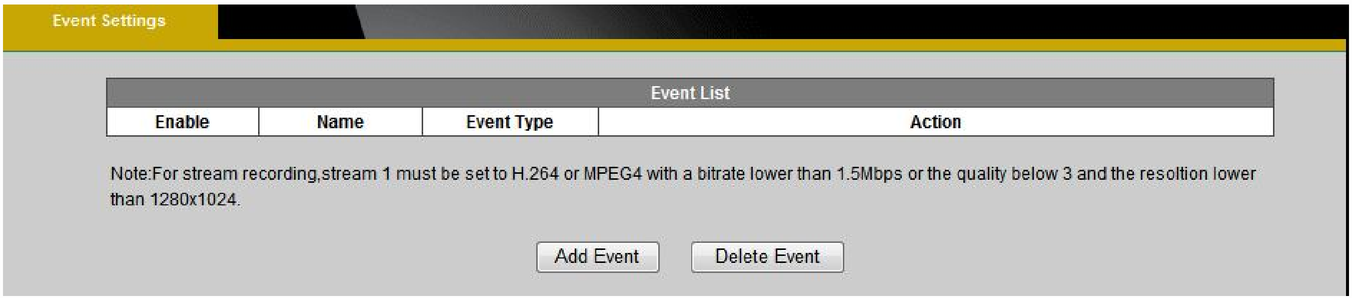
4. Click "Install Certificate" and follow the steps to finish the installation.



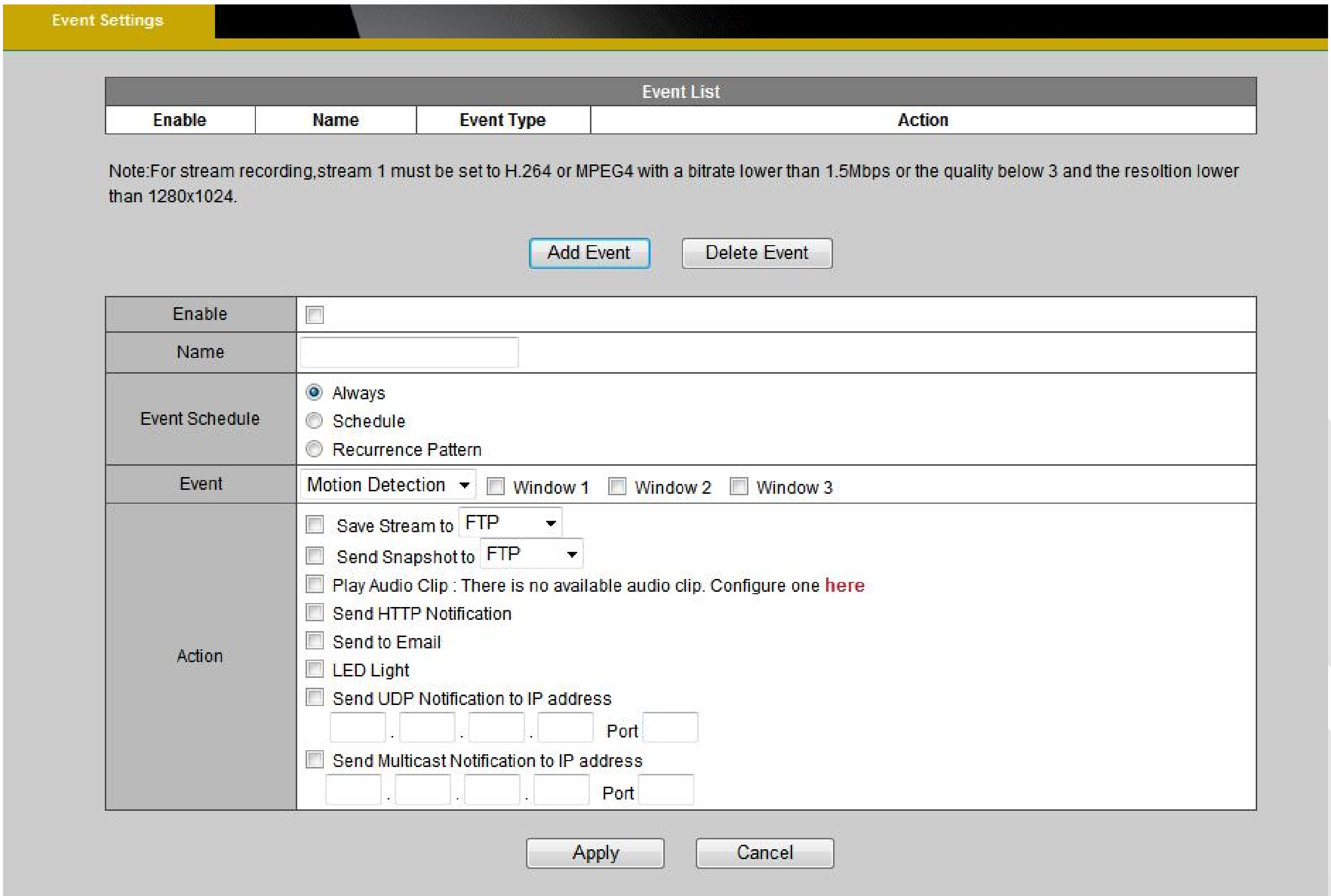
Event

Event Settings

When an event (such as unauthorized movement) occurs, the camera can be scheduled to perform certain actions. An Event Type is a set of parameters that defines these actions. This section describes how to configure the camera to perform certain actions when events occur.



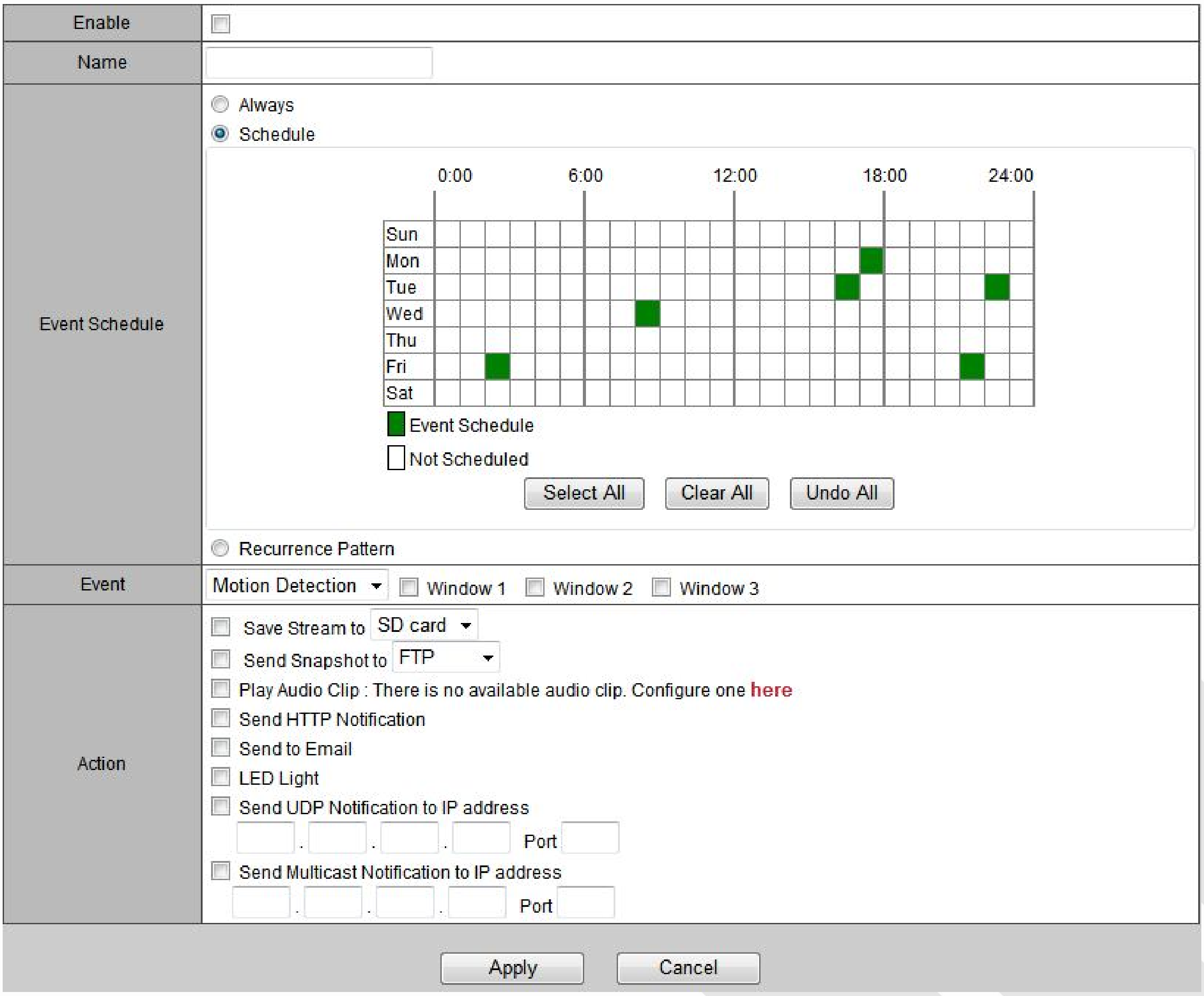
Click <Add Event> on the Event Settings page. The Event Setup page will appear.



How to Set Up an Event Schedule

Event Schedule describes how and when the camera performs certain actions.

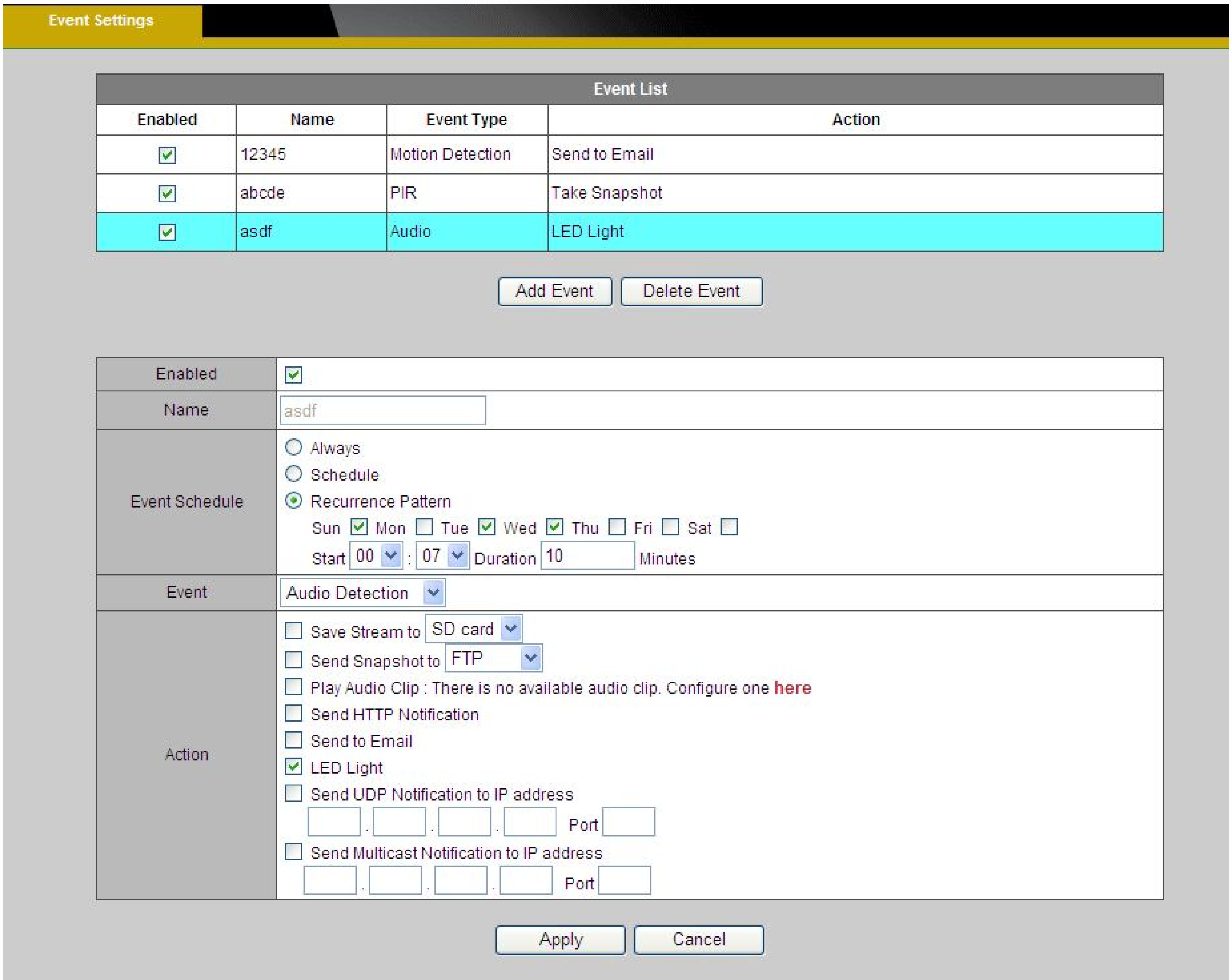
1. Check “Enable” and enter a descriptive name for the event schedule.
2. Set Event Schedule to define when the event is activated by selecting from Always (24 hours), Schedule or Recurrence pattern.
   a. If Schedule is selected from the Event Schedule, the following page will be displayed:



A Scheduled Event can be programmed for certain times and day. Click individual boxes to

schedule specific times for the camera to detect events.

b. If Recurrence Pattern is selected, the following page will be displayed.

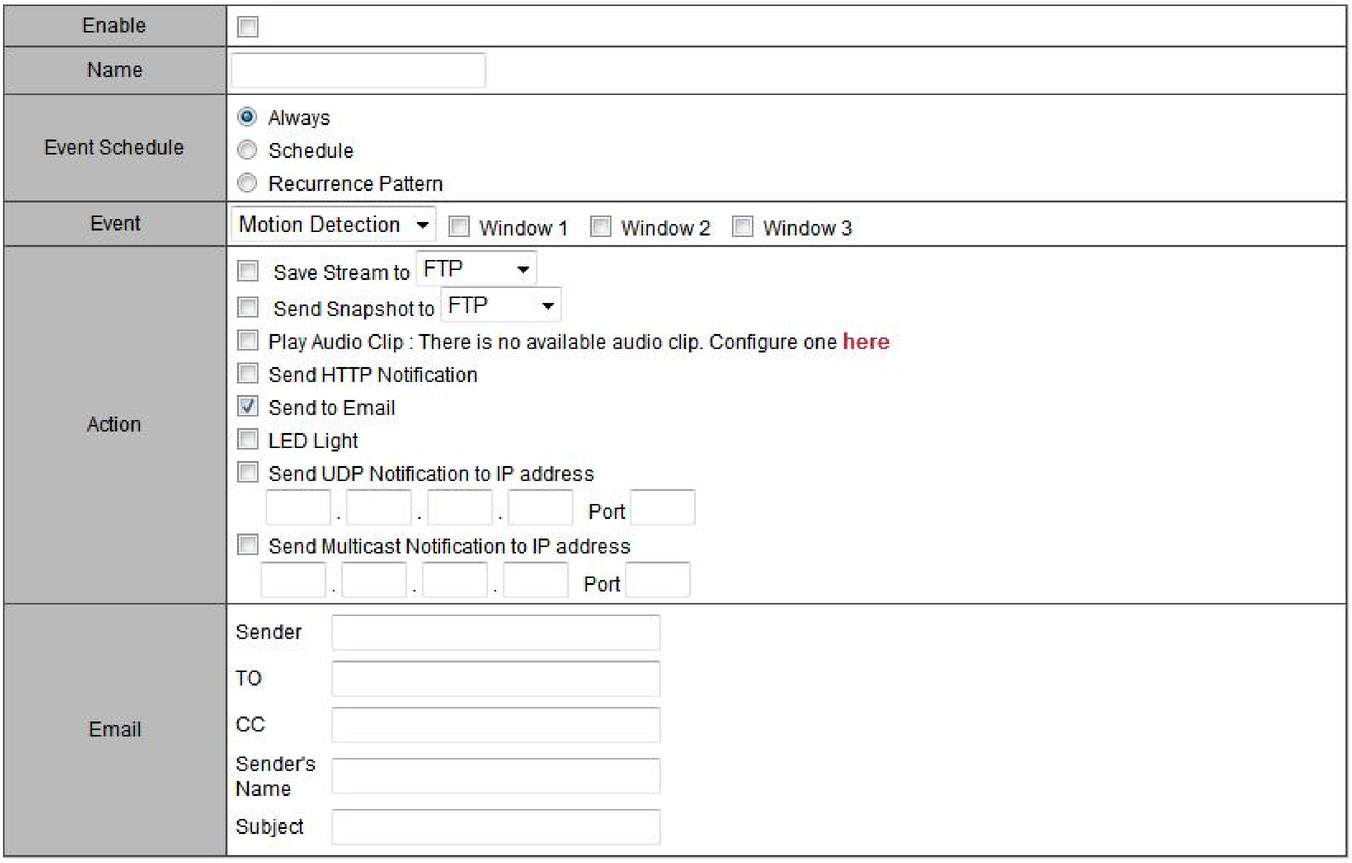


i. An event schedule can be programmed to recur at different times according to the user's needs. Select the days for the event schedule to occur. Select a start time and specify the duration.

3. Define what will trigger an event to occur by selecting an option from the Event drop-down list.

4. Select the Actions that will occur when the event is triggered.

a. When <Send to Email> is selected, the following page will be shown:



i. Sender - Enter the email address of the sender.

ii. Recipient - Enter the email address of the recipient. To enter multiple recipients, separate each using a comma.

iii. Sender's Name – Enter the sender's name that will appear in the recipient's inbox.

iv. Subject - Enter the title of the email.

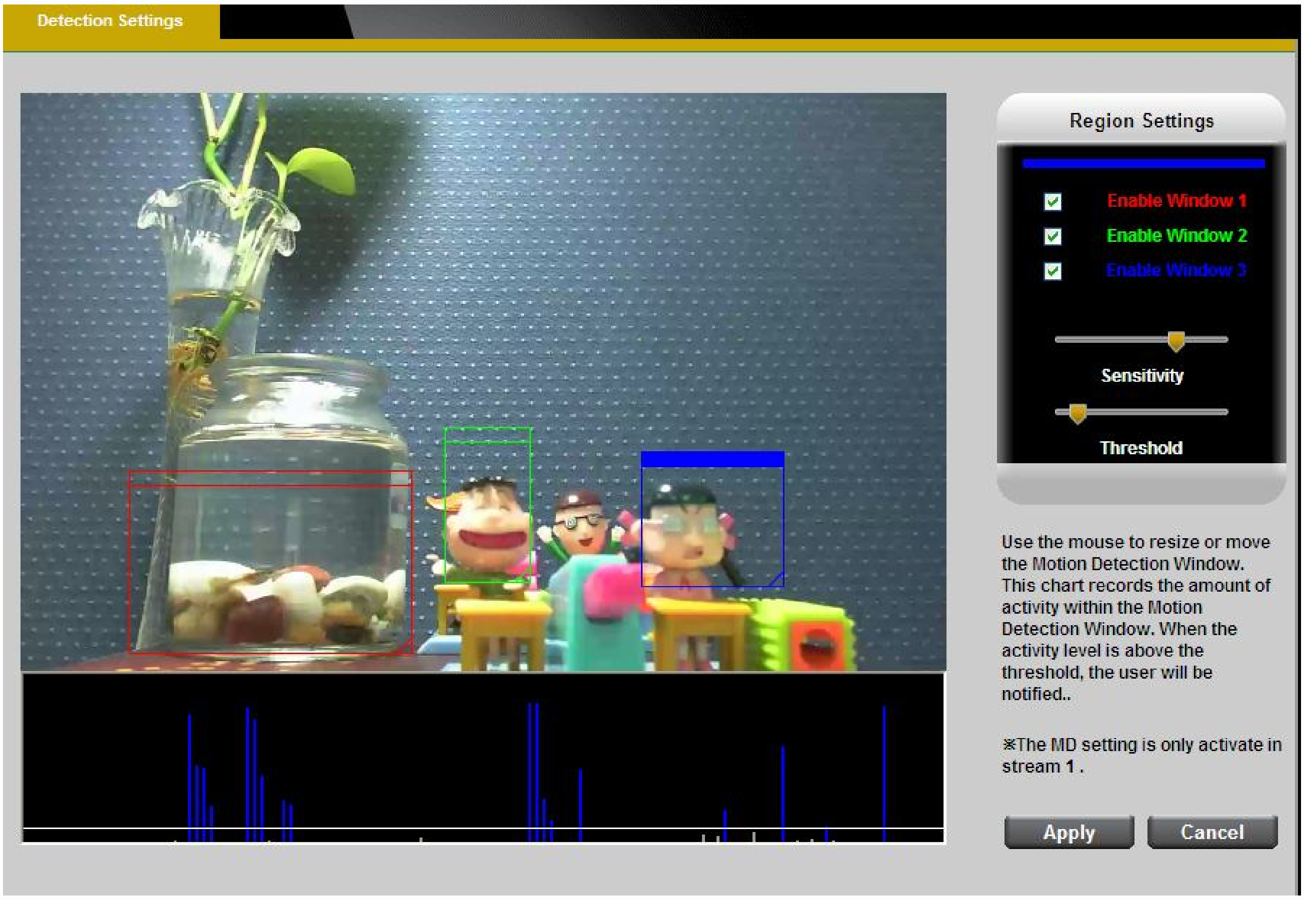
5. When complete, click **Apply** to save new event or **Cancel** to delete the event. The new event will appear on the event list.

6. To edit an event setting; select the event from the list. To remove an event setting from the list, select an event name from the list and then click <Delete Event>. Click <Add Event> to add more events.

NOTE - Refer to the Audio Clip section for more details about the "Play Audio Clip" action.

Motion Detection

Motion can be detected by measuring changes in the speed or vector of an object or objects in the monitored area. This section explains how to configure the Network Camera to enable motion detection.



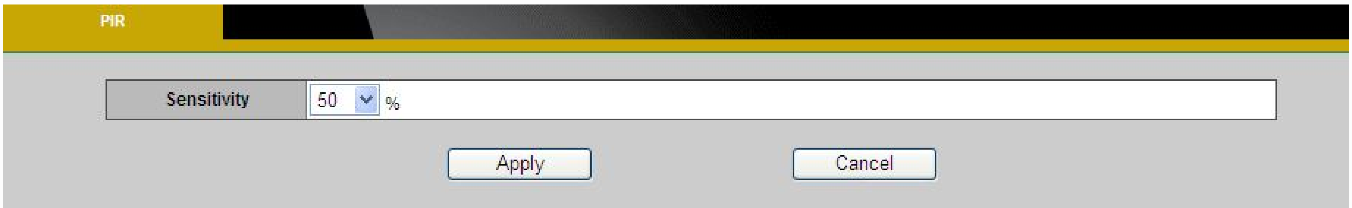
Detection Setting – Use this setting to enable and define the motion detection windows. The user can defined up to three areas on the live view window for motion detection.

1. Select <Window1>, <Window2>, or <Window3> to adjust the motion detection window.
2. Check the box to enable the window.
3. Use the mouse to resize or move the motion detection window.
4. Adjust the “Sensitivity” level. Lower sensitivity levels will result in more activity needed to trigger an event.
5. Adjust the “Threshold” to change the threshold level. The higher the threshold, the larger objects need to be to trigger an event.

6. The chart below the Live View window indicates the activity level of the Motion Detection window. When motion is detected by the camera and exceeds the defined threshold, a red bar will appear. Users can use this feature as a trigger source to send photos or videos to a remote server via email or FTP.

   Click **Apply** to apply settings or **Cancel** to cancel changes.

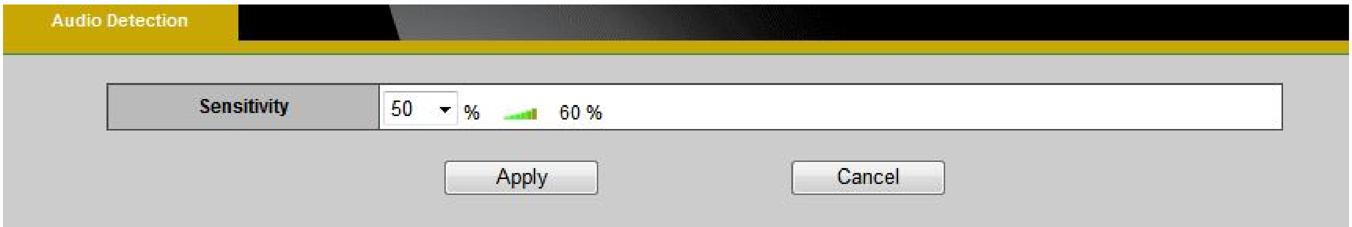
PIR(*)



The PIR (Passive InfraRed) sensor measures infrared light radiating from objects in its field of view. This can be used to detect a moving object, such as a person, in dimly lit areas.

Sensitivity – Adjust the sensitivity of the PIR Sensor from the drop down menu. The sensitivity can be set from 10 - 100%; with the default sensitivity set at 50%. Higher sensitivity levels will increase the range of the PIR Sensor. When the sensitivity level is set to 100%, the PIR sensor will be able to detect moving objects within six meters.

Audio Detection



Users can schedule an event to be triggered if there is a change in the sound level of a monitored area. Audio detection can be used to measure change in the ambient voice. Select the sensitivity from the drop-down menu.

Sensitivity - is used to adjust the sensitivity of the sound level from 10 - 100%. The default sensitivity is 50%.



Display the current sound level.

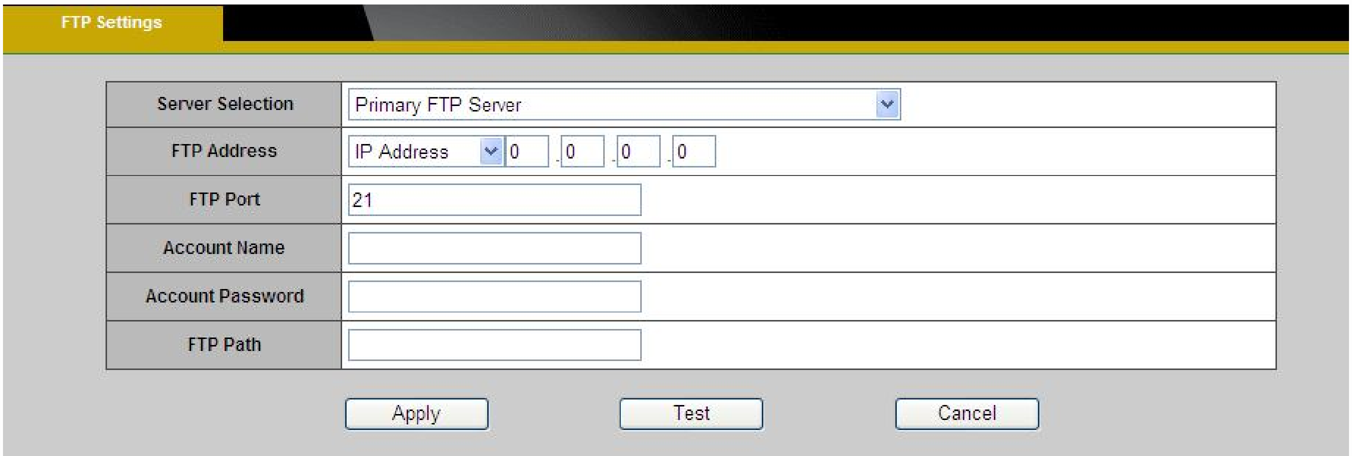
Click **Apply** to apply settings or **Cancel** to cancel changes.

Notifications

Use the tools in this section to specify what type of notification will be sent when an event occurs. The camera can send buffered images to an FTP server, Samba, Email, or HTTP.

FTP Settings

File Transfer Protocol (FTP) is used as an application component to automatically transfer files for program internal functions. Select "Primary FTP Server" from the Server Selection drop down menu to send media files to a FTP server when an event is triggered. Enter the FTP IP address or hostname. By default, the FTP port server is set to 21. Enter the account name, password and FTP Path to configure the settings.



Click **Apply** to apply settings or **Cancel** to cancel changes.

E-mail Settings

Select “Primary Email Server” option from the Server Selection drop down menu to send media files to an email server when an event is triggered.

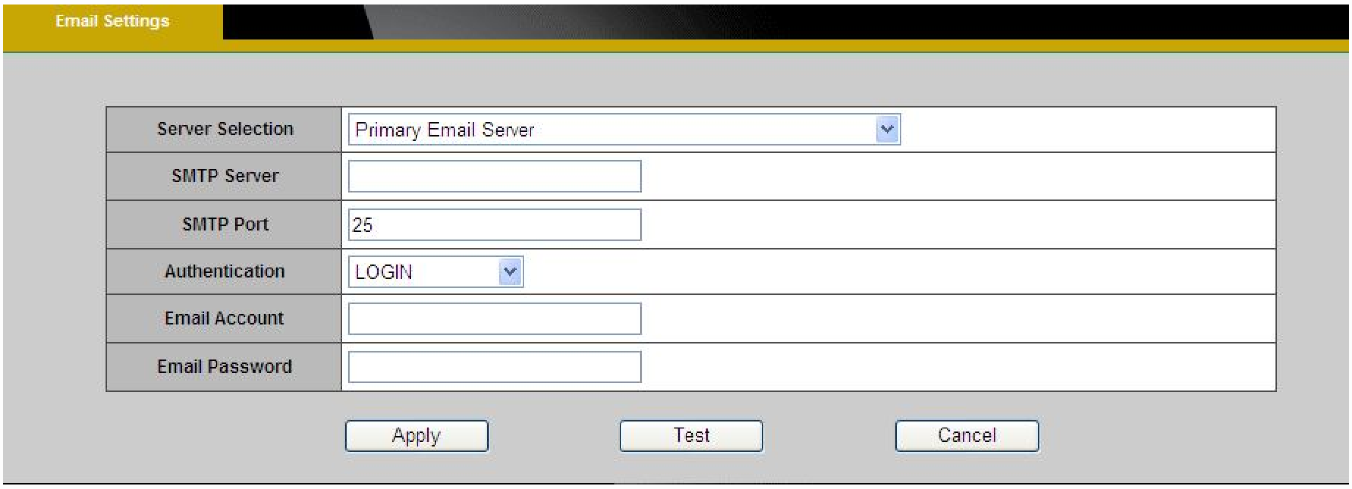
SMTP Server - Enter the server host name of the email server.

SMTP Port - Enter the port number of the email server; by default, the SMTP port is set to 25.

Authentication - Select the authentication type from the drop-down menu.

Email Account - Enter the user name of the email account if necessary.

Email Password - Enter the password of the email account if necessary.



Click **Apply** to apply settings or **Cancel** to cancel changes.

Samba Settings

Select this option to send the media files via a network neighborhood when an event is triggered.

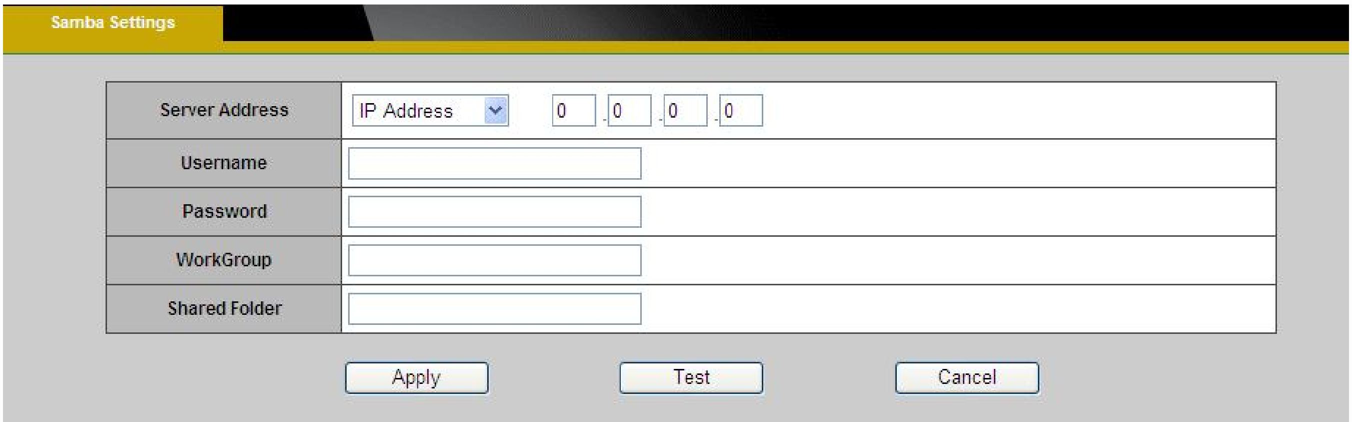
Server Address - Enter the IP address of the Samba server.

User Name - Enter the user name of the Samba server.

Password - Enter the password of the Samba server.

Work Group - Enter the workgroup of the Samba server.

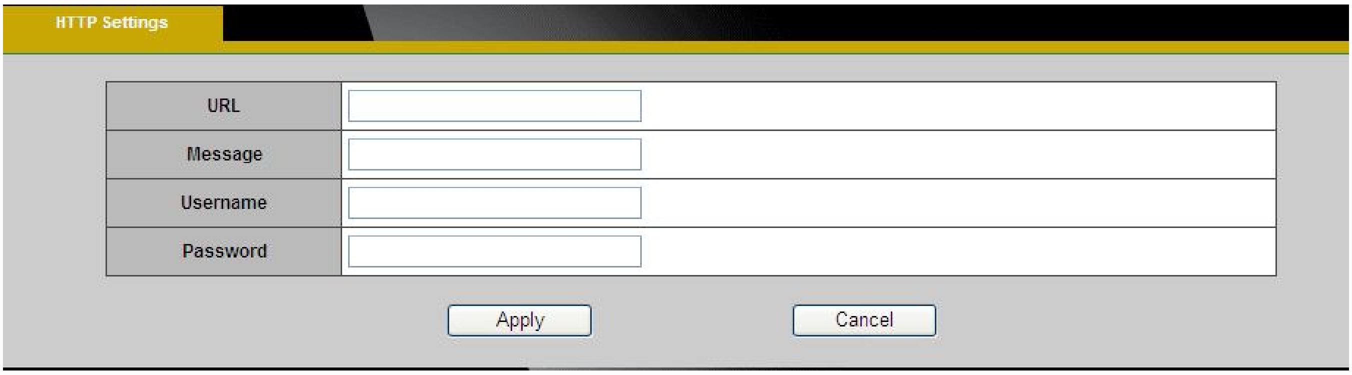
Shared Folder - Enter the share folder of the Samba server.



Click **Apply** to apply settings or **Cancel** to cancel changes.

HTTP Settings

Select this option to send the media files via an HTTP notification when an event is triggered.



URL –Specify the URL to send HTTP requests.   The URL is normally written as:

http://ip_address/ notification.cgi?parameter

ip_address – type the IP address or host name of the HTTP host.

Parameter – type the notification parameter if necessary.

Example

URL - http://192.168.1.1/xxxx.cgi

Message - name1=value1&name2=vlaue2

Result - http://192.168.1.1/xxxx.cgi? name1=value1&name2=vlaue2

Ex:

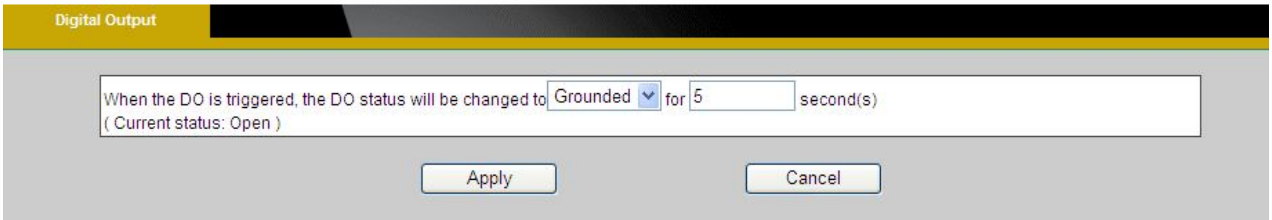
https://192.168.1.1/notification.cgi?event=MD&camera=FB-100A

Message - Enter the message notification that will be sent when an event is triggered.

Enter the user name and password if necessary.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Digital Output (DO) (*)

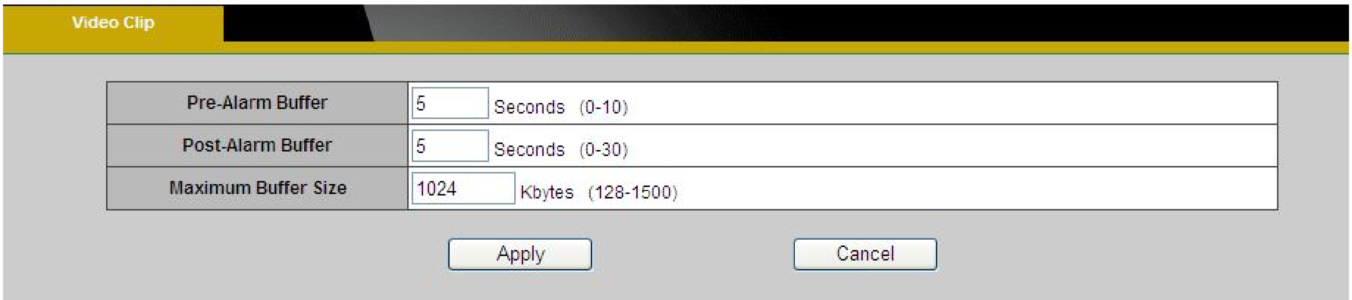


The DO socket allows the IP camera to send output to an external device. While executing the DO notification action, the IP camera drives voltage on the connected DO wire to the triggering voltage level for X number of seconds. The connected external device will then be triggered for X number of seconds.

Triggered Voltage Level - OPEN or GROUND

Users should select the option according to the specification of their external device.

Video Clip



This function is used to determine when video clips will be recorded and stored after an event is triggered.

Pre-alarm buffer - Images can be stored internally on the server from the time immediately preceding the trigger. Enter the desired length of time.

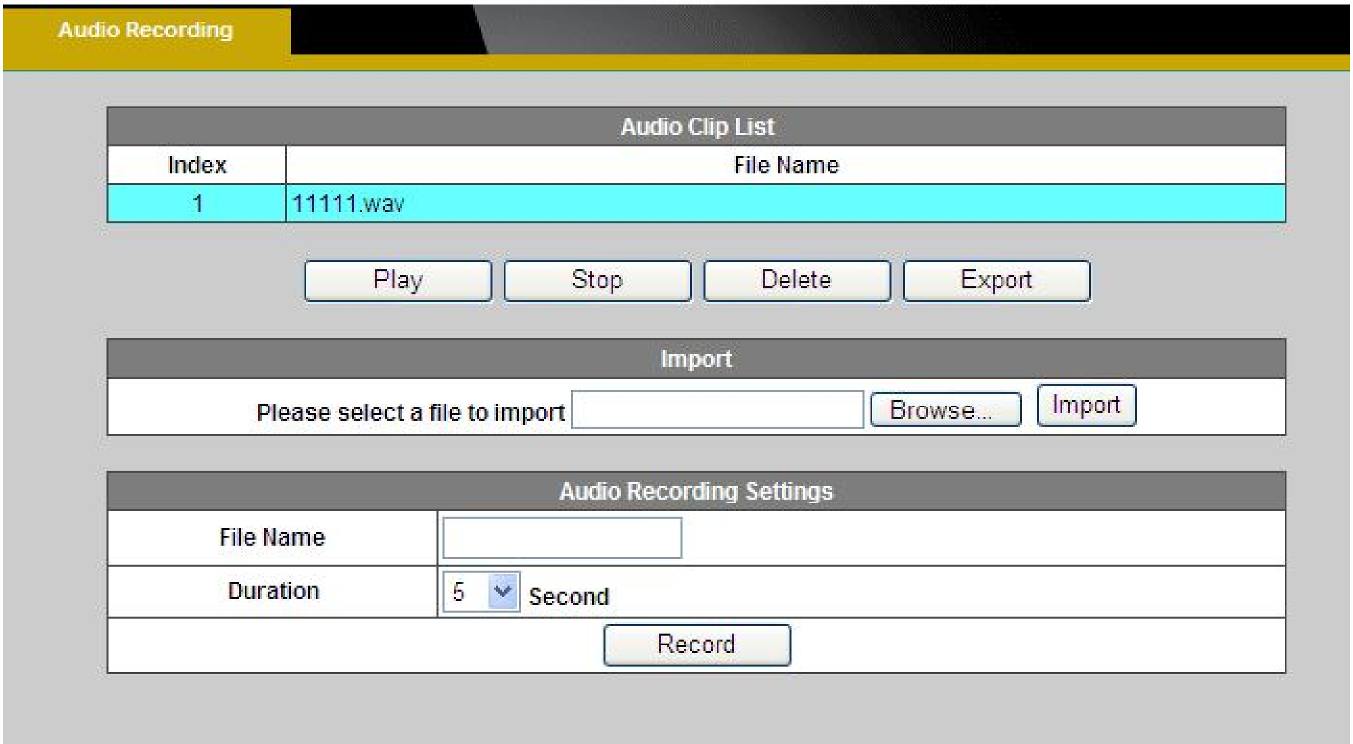
Post-alarm buffer - Images can be stored internally on the server from the time immediately following the trigger. Enter the desired length of time.

Maximum buffer size –Specify the maximum file size allowed.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Audio Clip(*)

Audio Recording – Audio clips can be recording and played when an event occurs.

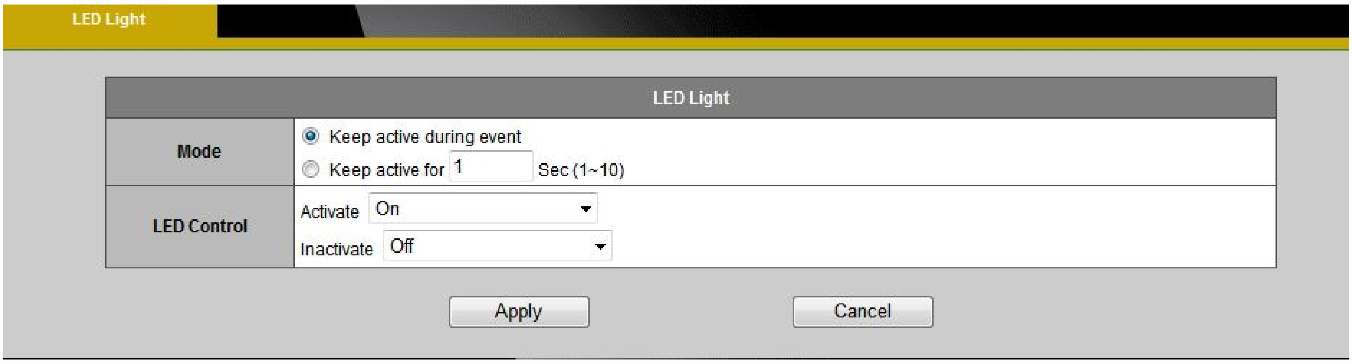


Click **Browse** to import a file from a local hard drive or network disk. Select the file and click **Import.** **NOTE** – The camera can only play audio clips which are saved as .wav files with G.711 u-law encoding in 8000 Hz sampling rate.

To record a new clip using the camera's microphone:

1. File Name-Enter a file name.
2. Duration - Enter the number of seconds to record.
3. Click **Record** to record the new audio clip.
4. The new audio clip will appear on the audio clip list.
5. Select an audio clip file from the Audio Clip List.
    a. Play- Select to hear the audio clip
    b. Stop- Select to stop playing the audio clip.
    c. Delete- Select to delete an audio clip.
    d. Export- Select to export the audio clip to a local hard drive or network disk.

LED Light(*)



Mode – Select “Keep active during event” or “Keep active for” a specific amount of time when an event is triggered.

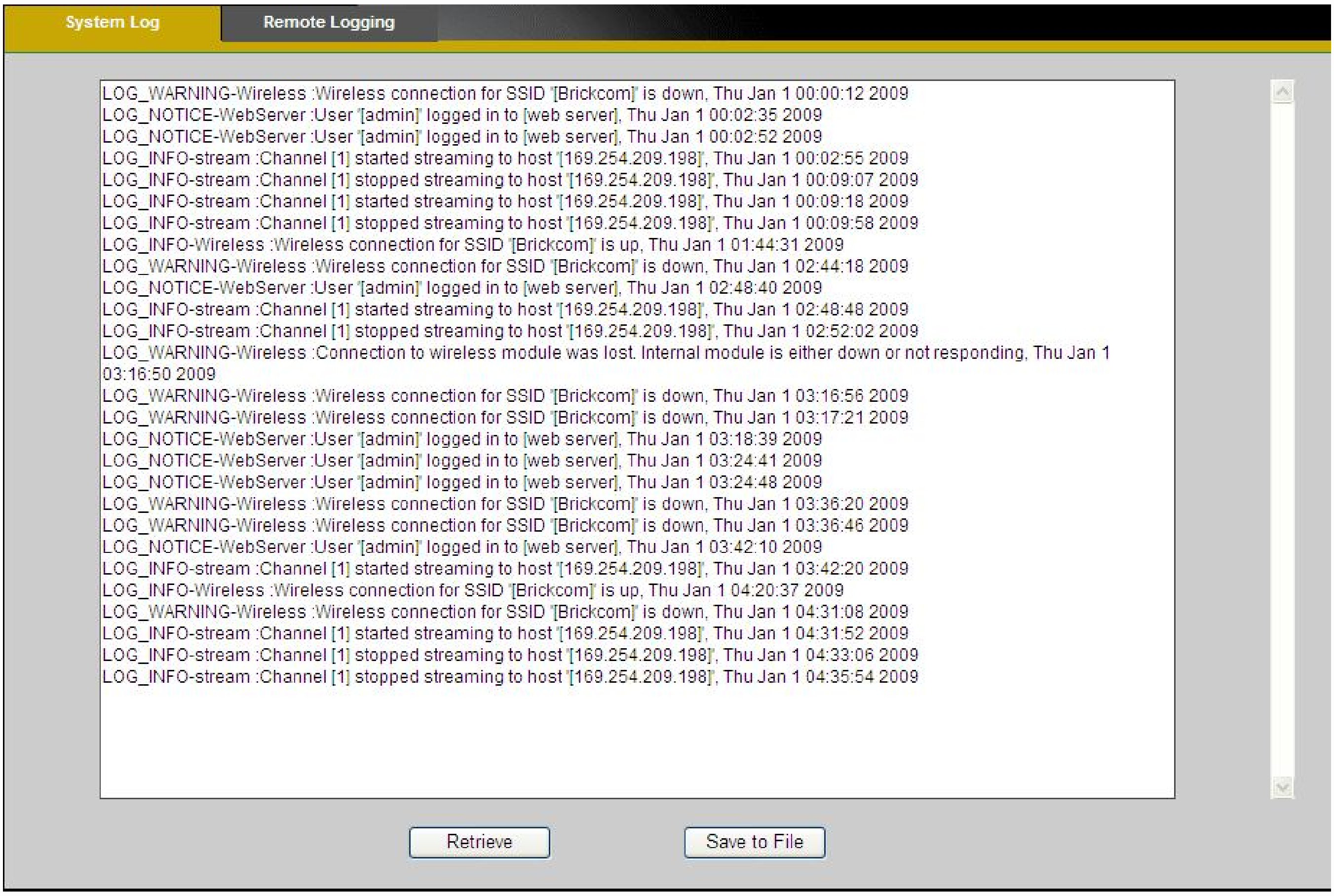
LED Control - The LED on the front of the camera can be set to flash at a configurable interval when an event is triggered. From the Activate drop down menu, select a percentage which the LED will brighten to. When the LED reaches the selected percentage, it can be configure to fade to off or turn off. Select the option from the Inactive menu.

Click **Apply** to apply settings or **Cancel** to cancel changes.

System

System Log

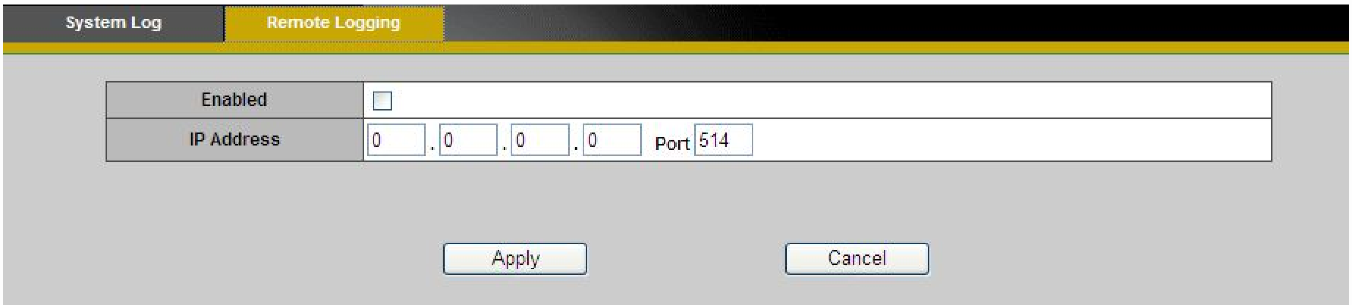
Log – Set up the camera to record a system log when an event is triggered.



This page displays the system's log in chronological order. The system log is stored in the camera's buffer area and will be overwritten when the buffer area is full.

Click **Retrieve** to retrieve the log or click **Save to file** to save the system log.

Remote Logging



The user can configure the camera to send the system log file to a remote server as a log backup.

Click to enable remote log and enter the IP address of the remote server.

Enter the port number of the remote server.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Date and Time

Manual – Manually enter the date and time.

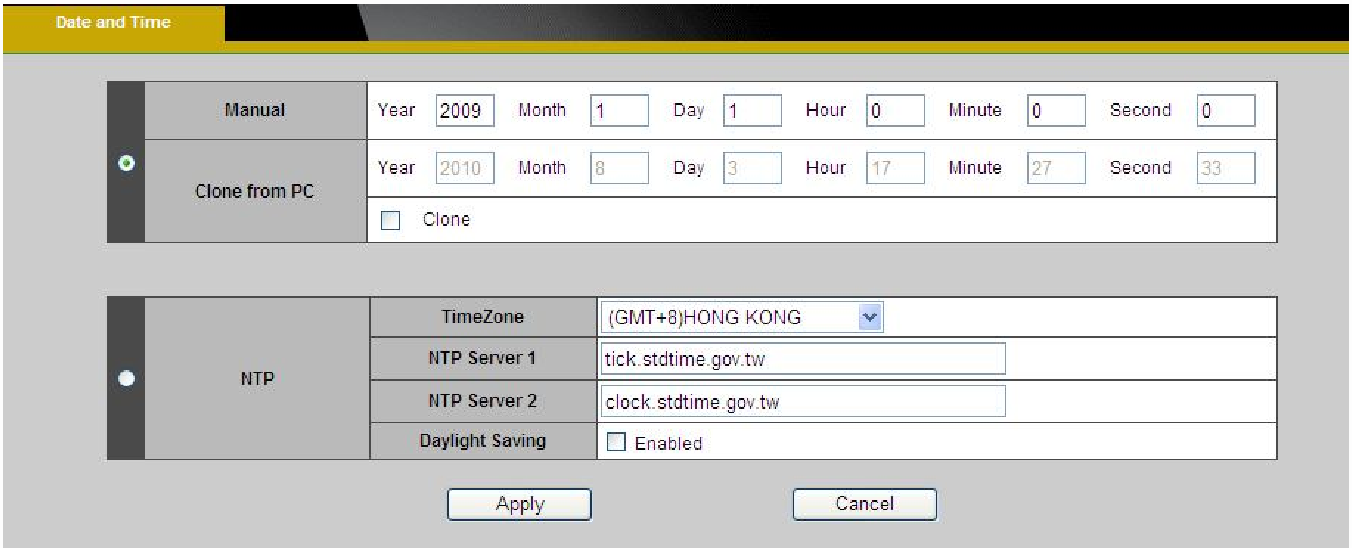
Clone from PC – The camera will sync with the time, date and time zone of the computer used to modify the camera settings. Check "Clone" to utilize this option. The read-only date and time of the PC will be displayed.

NTP – (Network Time Protocol) - NTP is a protocol for synchronizing the clocks of a computer system. Select to update the time with a NTP server on an hourly, daily, weekly, or monthly basis.

Time Zone – Select the local time zone from drop-down menu.

NTP Server 1 and Server 2 - Enter the address of the NTP server

Daylight Saving - Enable this option to automatically update for Daylight Savings Time.



Click **Apply** to apply settings or **Cancel** to cancel changes.

Device Information

System Information – Displays the complete system information of the camera.

System Information | Network Settings | Video/Audio Settings | Client Information

LAN MAC Address	00:26:82:B6:3C:7B
Firmware Version	v3.1.0.2
Product Name	CB-100Ap
Hardware Version	V2
Company Name	Brickcom Corporation
UPnP Name	CB-100Ap-3c7b

Network Settings –Displays the complete network settings information of the camera.

System Information | Network Settings | Video/Audio Settings | Client Information

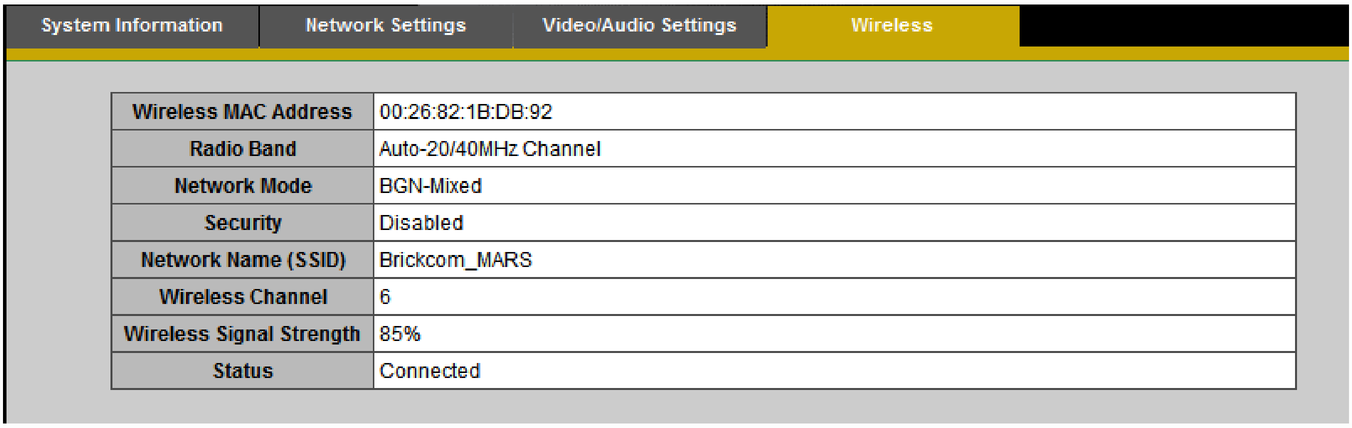
IP Information	
IP Setting Type	DHCP
IP Address	192.168.1.21
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.2
Primary DNS	192.168.1.2
Secondary DNS	192.168.1.2
Network Services	
UPnP	Enabled
DynDNS	Disabled
TZO	Disabled
NO-IP	Disabled

Video/Audio Settings –Displays the complete video/audio settings information of the camera.

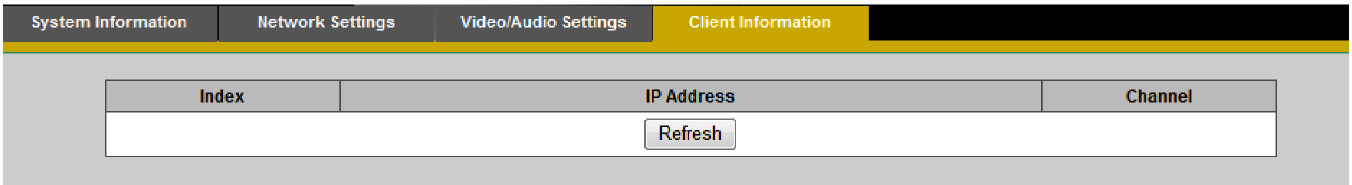
System Information | Network Settings | **Video/Audio Settings** | Client Information

Stream 1	
Video Codec	H.264
Video Resolution	1280x800
Video Frame Rate	25 fps
Video Bitrate	4000 Kbps
Audio Codec	N/A
Multicast IP	N/A
Stream 2	
Video Codec	MJPEG
Video Resolution	1280x800
Video Frame Rate	25 fps
Video Quality	3
Audio Codec	N/A
Multicast IP	N/A

Wireless(*) - Displays the complete wireless information of the camera.

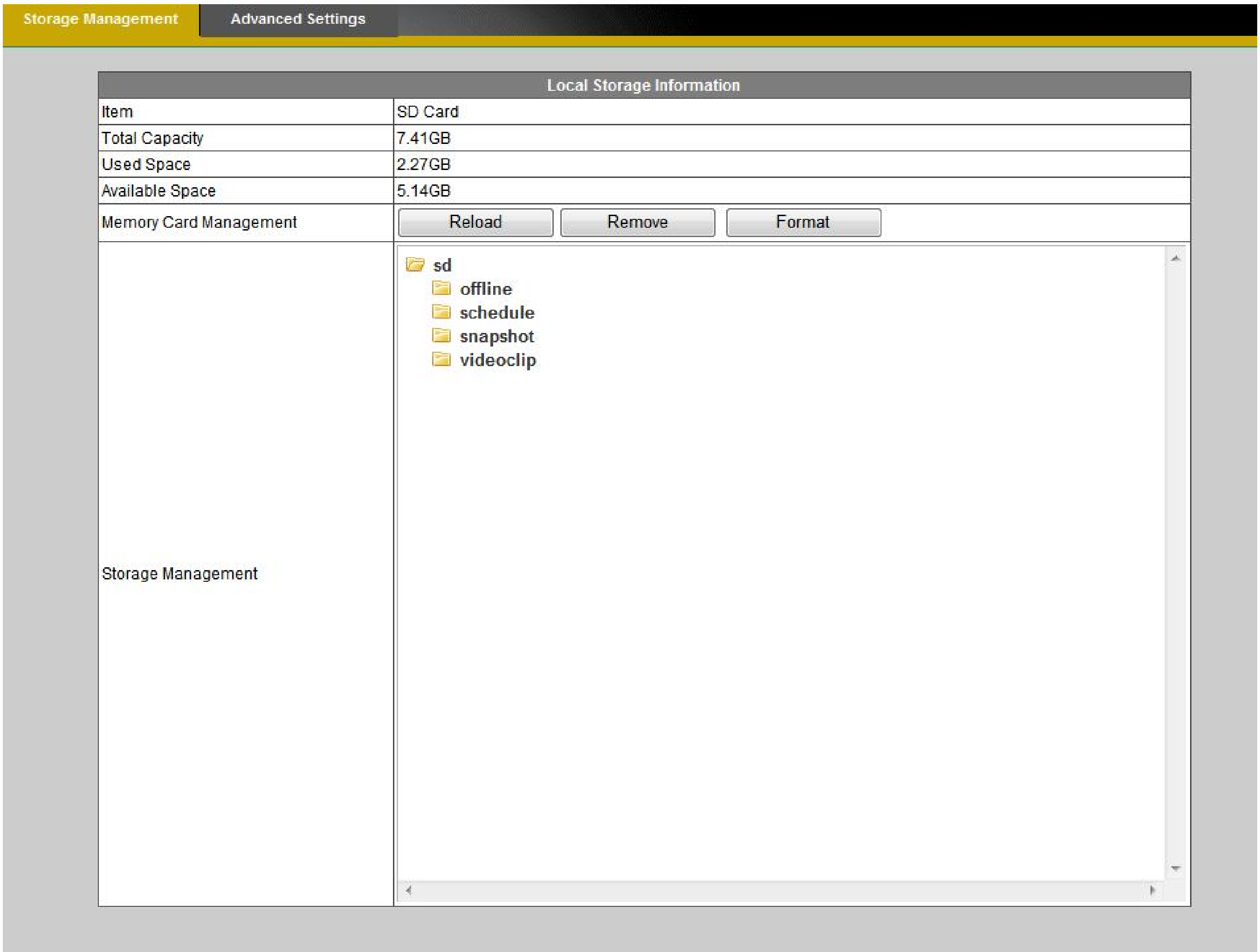


Client Information- Displays the RTSP Client .You will see a list of RTSP clients with the following information: IP Address and channel.



Storage Management (*)

Storage Management is used to view all the recorded files on the Micro-SD/SDHC card.



Click **Reload** to refresh the list of recorded files.

Click **Remove** to safely remove the Micro-SD/SDHC memory card.

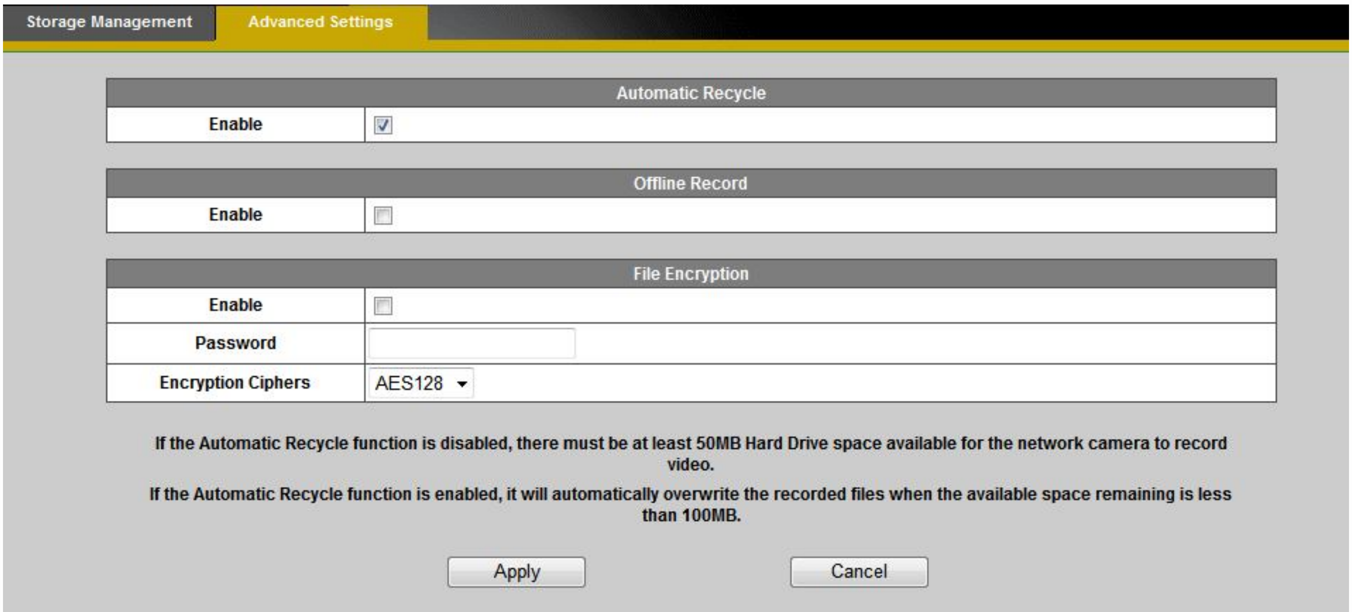
Click **Format** to format the Micro-SD/SDHC memory card.

Left click on the folder to list the recorded files. The user can either play the snapshot of the recorded files by moving the mouse pointer over the file or double click on a file to play it.

Right click on the folder to download, play or delete the recorded files.

NOTE – The user may need to install QuickTime multimedia framework to play the video clips.

Advanced Settings



Automatic Recycle (*) – Enable to automatically overwrite older files when the available space remaining on the Micro-SD/SDHC card is less than 100MB. If the Automatic Recycle function is disabled, there must be at least 50MB hard drive space available for the camera to be able to record video files.

Offline Record – Enable to keep recording if the Network Camera is offline.

File Encryption – Enable the File Encryption to encrypt recorded video files. Files are encrypted using OPENSSL.

To unlock the encrypted file, please download and install the OPENSSL toolkit from the OPENSSL Web site.

http://gnuwin32.sourceforge.net/packages/openssl.htm

Use the following command to encrypted file:

openssl enc -ciphername [-in filename] [-out filename] [-pass arg] [-e] [-d] [-a/-base64] [-A] [-k password] [-kfile filename] [-K key] [-iv IV] [-S salt] [-salt] [-nosalt] [-z] [-md] [-p] [-P] [-bufsize

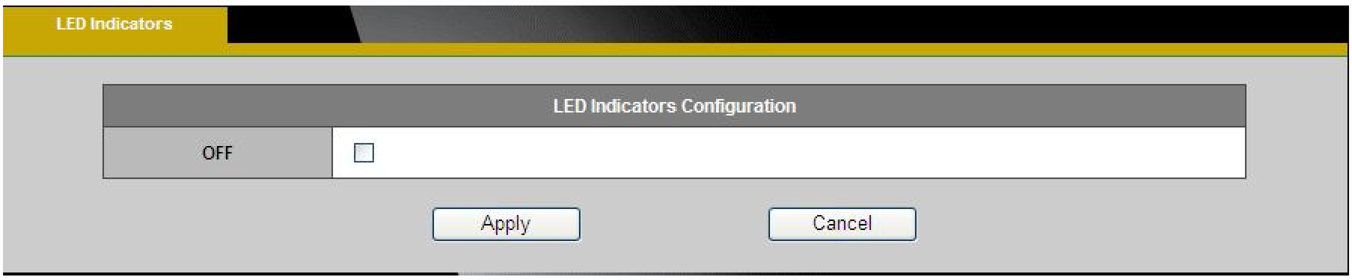
number] [-nopad] [-debug] [-none] [-engine id]

For example: openssl enc -d -aes128 -in encryptfile -out decryptfile -k password

Click **Apply** to apply settings or **Cancel** to cancel changes.

LED Indicators

The LED on the front of the camera can be configured to remain unlit. Check “OFF” to enable this function.

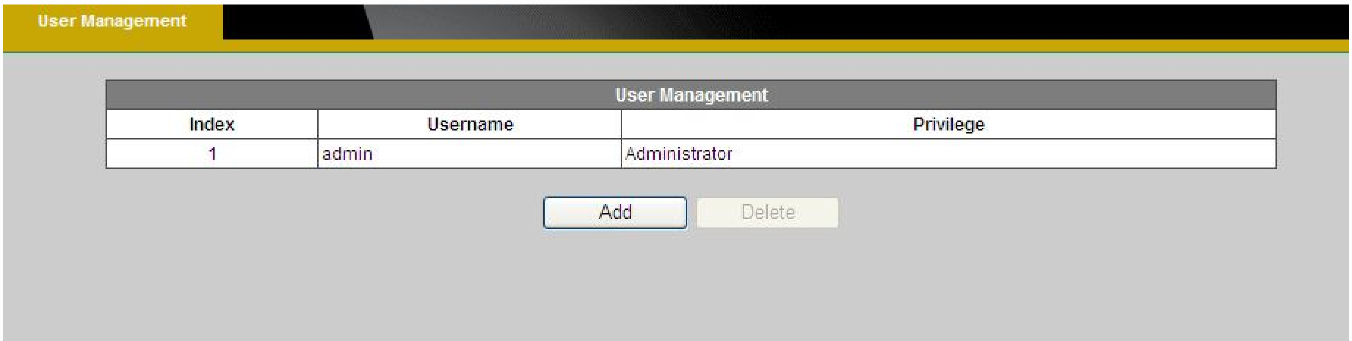


Click **Apply** to apply settings or **Cancel** to cancel changes.

Maintenance

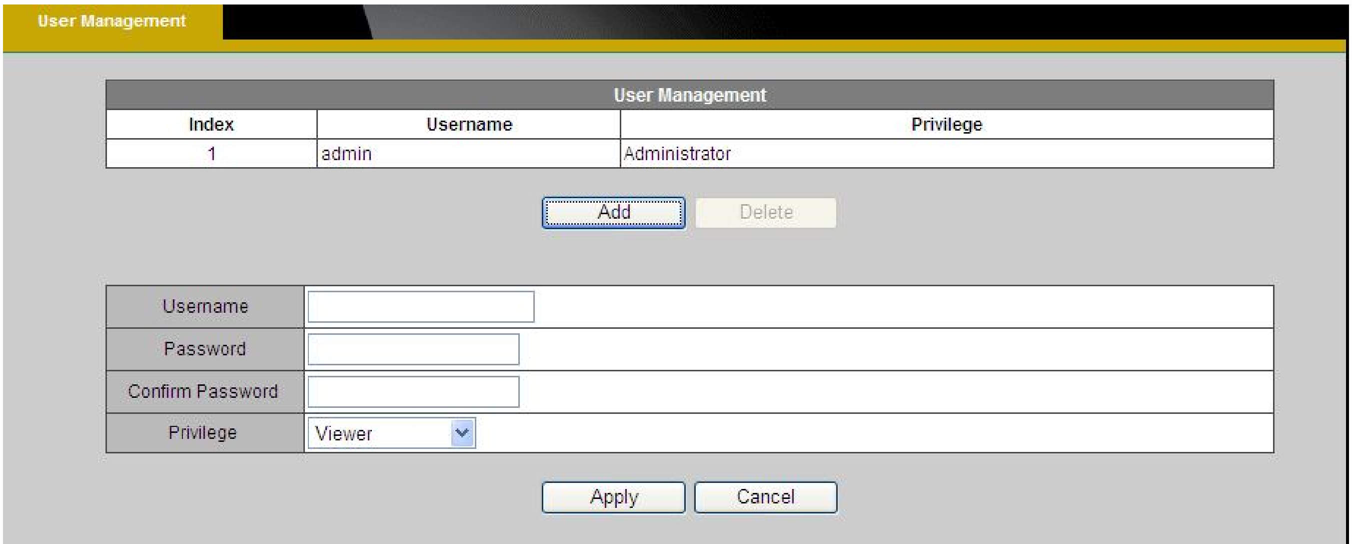
User Management

This section explains how to enable password protection and create multiple accounts.



The administrator account name is "admin", which is permanent and cannot be deleted.

Click **Add** to create an account.



Enter the new user's name, password and confirm password. Administrators can add up to 10 user accounts.

Select the privilege level for the new user account from the drop-down list. Privilege levels can be assigned as:

- Administrator - user has access to view and change the Configuration page. Users with administrator privilege can change other user's access rights and delete user accounts. Click **Delete** or **Update** to delete or modify a user's account.
- Viewer - user can only access the main page for live viewing.
- Remote Viewer - user can only access the main page for live viewing using TCP protocol.

Language

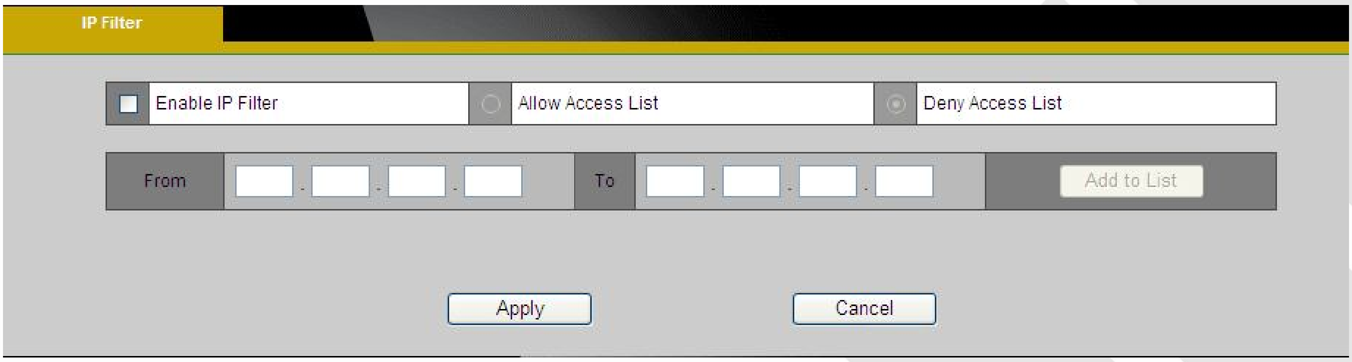


Select the desired language from the radio button.

Click **Apply** to apply settings or **Cancel** to cancel changes.

IP Filter

The IP Filter is used to filter the IP addresses which are able to access the network camera. Enable the IP Filter and select to allow or deny a range of IP addresses access to the server. Click **Add to list** to add the IP range to the IP filter list.



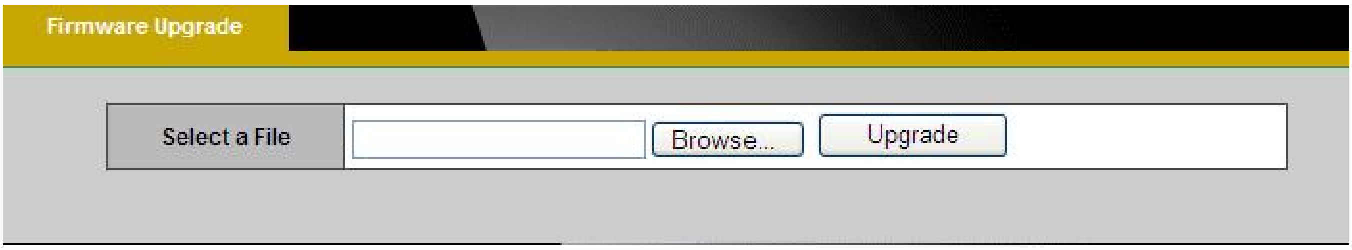
Click **Apply** to apply settings or **Cancel** to cancel changes.

Firmware Upgrade

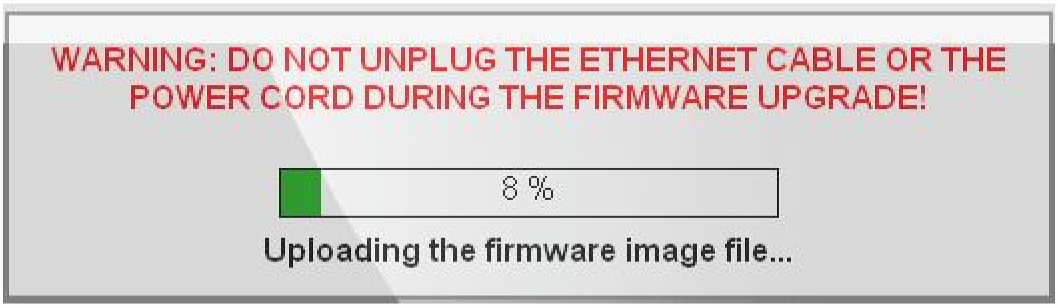
This feature allows the user to upgrade the camera firmware. It will take a few minutes to complete the process.

NOTE - Do not power off the camera or camera during the upgrade.

Upgrade - Click **Browse…** and specify the firmware file. Click **Upgrade**. The camera will begin upgrading and will reboot automatically when the upgrade is finished.



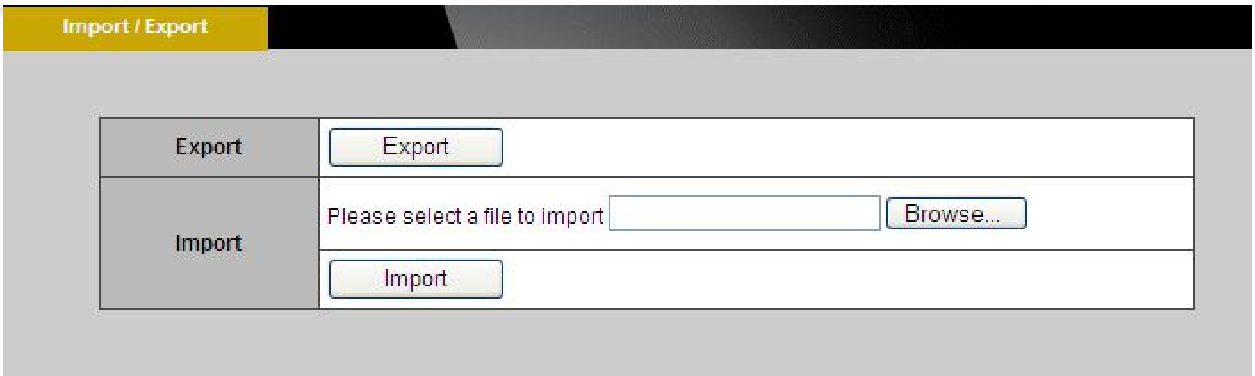
The following message will show during the firmware upgrading process.



Configuration

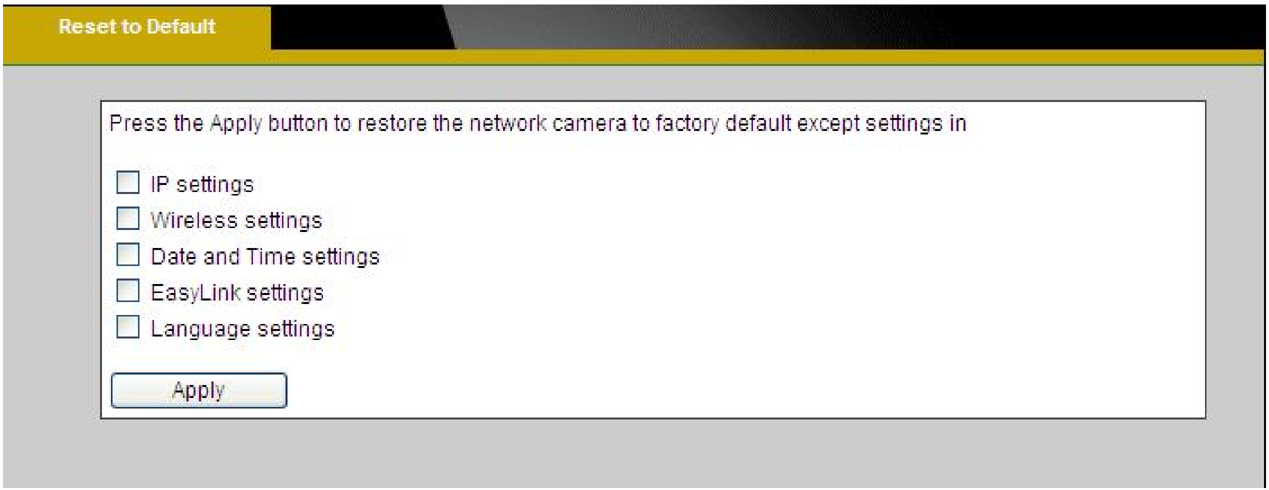
This feature allows the user to export/import the configuration files of the network camera.

Import/Export - Click **export** to pop up a dialog to indicate the location and file to export. Click **browse** to indicate the location and file of the camera configuration and click **import** to import the configuration file back into the network camera.


Import / Export
Export
Export
Import
Please select a file to import
Browse...
Import

Reset to Default

This section is used to restore the camera to default factory settings. Check the boxes to preserve the IP, Wireless, Date and Time, EasyLink, or Language settings. Click **Apply** to restore the camera to default factory settings.



Reboot



This feature will reboot the camera. Click **Apply** to begin. A message will pop up asking "The device will reboot. Are you sure?" Click "OK" to continue. The camera will take about one minute to reboot.



The following message will show during the rebooting process.



When completed, the live video page will be displayed in the web browser.